

Labor Market Experiences After Postsecondary Education

Earnings and Other Outcomes of Florida's Postsecondary Graduates and Completers



December 2015

Prepared by Mark Schneider
President, College Measures
Vice President and Institute Fellow,
American Institutes for Research

CollegeMeasures.org

Contents

Executive Summary	1
Florida College System and District Technical Centers	2
State University System of Florida Degrees and Florida College System Bachelor's Degrees	3
Where the Jobs Are	4
Introduction.....	6
Florida Colleges and District Technical Centers	6
Variation in First-Year Earnings of Graduates With Associate Degrees	9
Associate of Arts Degree	9
Associate of Science Degree.....	11
Employment Outcomes of Graduates With A.S. Degrees	13
What Students Study Matters	15
Associate of Applied Science Degree.....	18
Debt Levels by College.....	23
Career Certificates and College Credit Certificates	25
Career Certificates	25
Career Certificates Awarded by District Technical Centers.....	26
Career Certificates Awarded by the Florida College System	31
College Credit Certificates	34
Levels of Public Assistance	36
Completers With Career Certificates Who Received Public Assistance	37
Completers With College Credit Certificates Who Received Public Assistance	40

Degrees and First-Year Earnings Among Graduates From Florida’s Universities	42
First-Year Earnings of Graduates With Bachelor’s Degrees	44
Variation by University	44
Variation by Fields of Study	46
Variation Across Fields of Study in Different Universities	47
Enrollment Patterns in Continuing Education of Students With Bachelor’s Degrees	51
Debt Levels Among Students in Florida’s Universities.....	53
Bachelor’s Degrees Earned at Florida State Colleges	54
First-Year Earnings of Graduates With Master’s Degrees.....	58
Specialist Degrees	60
Professional Degrees.....	64
Changes in First-Year Earnings Among Graduates From Universities	66
Changes in Median First-Year Earnings Among Graduates With Master’s Degrees	67
Where the Jobs Are	69
Growth in Occupations.....	72
Where Is the Greatest Demand Relative to Supply?	73
Higher Education Pays: But Far More for Some Programs Than for Others	75
Appendix	76
Methodology.....	83
Completers Cohort 2008–09 Through 2012–13	83
Key Concepts	83
Definitions	84

Area of Study.....	84
Number of Completers.....	84
Employment Records.....	84
First-Year Full-Time Earnings	85
Total Found Employed Percentage	85
Total Found Employed Full-Time Percentage	85
Median First-Year Earnings	85
Found Continuing Education Percentage	85
Public Assistance Percentage.....	85
Student Loan Debt.....	85
Data Disclosure.....	86

List of Figures

Figure 1: Number of Postsecondary Academic Credentials Awarded and Median First-Year Earnings, Academic Years 2008–09 Through 2012–13	8
Figure 2: Median First-Year Earnings of Graduates With A.A. Degrees, by College	10
Figure 3: Median First-Year Earnings of Graduates With A.S. Degrees, by College	12
Figure 4: Employment Rates Among Graduates With A.S. Degrees, by College.....	14
Figure 5: Median First-Year Earnings of Graduates With A.S. Degrees in the Most Popular A.S. Programs of Study Among Colleges in Florida.....	15
Figure 6: Median First-Year Earnings of Graduates With A.S. Degrees in the Three Most Popular A.S. Programs of Study Among Colleges in Florida.....	17
Figure 7: Median First-Year Earnings of Graduates With A.A.S. Degrees, by College	19
Figure 8: Median First-Year Earnings of Graduates With A.A.S. Degrees in the Most Popular A.A.S. Fields of Study in Florida	21
Figure 9: Median First-Year Earnings of Graduates With A.A.S. Degrees in Business Administration, by College.....	22
Figure 10: Average Federal Loan Amount per Student, by College, 2012–13	24
Figure 11: Median First-Year Earnings of Completers With Career Certificates, by District Technical Center.....	29
Figure 12: Median First-Year Earnings of Completers With Career Certificates Overall and Those With Career Certificates in Practical Nursing, by District Technical Center	30
Figure 13: Median First-Year Earnings of Completers With Career Certificates, by College.....	32
Figure 14: Median First-Year Earnings of All Completers With Career Certificates Overall and Those With Career Certificates in Law Enforcement, by College.....	33
Figure 15: Median First-Year Earnings of Completers With College Credit Certificates in the Most Popular College Credit Certificate Programs in Florida	36
Figure 16: Median First-Year Earnings of Graduates With Academic Degrees From Universities, by Degree.....	43

Figure 17: Median First-Year Earnings of Graduates With Professional Degrees From Universities, by Degree.....	43
Figure 18: Median First-Year Earnings of Graduates With Bachelor's Degrees, by University	45
Figure 19: Median First-Year Earnings of Graduates From Popular Bachelor's Degree Programs, by Program	47
Figure 20: Median First-Year Earnings of Graduates with Bachelor's Degrees in Psychology, by University	48
Figure 21: Median First-Year Earnings of Graduates With Bachelor's Degrees in Business Administration and Management, by University	49
Figure 22: Median First-Year Earnings of Graduates With Bachelor's Degrees in Biology or Mathematics, by University	50
Figure 23: Average Federal Loan Amount per Student, by University, 2012–13.....	54
Figure 24: Median First-Year Earnings of Graduates With Bachelor's Degrees, by College	57
Figure 25: Median First-Year Earnings of Graduates With Bachelor's or Master's Degrees, by Popular Fields of Study	58
Figure 26: Median First-Year Earnings of Graduates With Bachelor's or Master's Degrees, by University	60
Figure 27: Median First-Year Earnings of Graduates With Specialist Degrees, by Program.....	61
Figure 28: Median First-Year Earnings of Graduates With Specialist Degrees, by University	62
Figure 29: Median First-Year Earnings of Graduates With Credentials in Educational Leadership and Administration, by Postbaccalaureate Credential	63
Figure 30: Median First-Year Earnings of Graduates With Credentials in Curriculum and Instruction, by Postbaccalaureate Credential.....	64
Figure 31: Median First-Year Earnings of Graduates From Universities, by Degree.....	66
Figure 32: Number of Jobs Gained or Lost in Florida From April 2014 to April 2015, by Industry (Seasonally Adjusted)	70

List of Tables

Table 1:	Employment Outcomes for Graduates and Completers With A.S. Degrees in the Most Popular A.S. Programs of Study Among Colleges in Florida	16
Table 2:	Employment Outcomes for Graduates with A.A.S. Degrees, by College	20
Table 3:	Employment Outcomes of Completers With Career Certificates Awarded by FCS Institutions and DTCs	26
Table 4:	Employment Outcomes for Completers With Popular Career Certificates Awarded by District Technical Centers.....	26
Table 5:	Employment Outcomes for Completers of Career Certificates, by District Technical Center.....	27
Table 6:	Employment Outcomes for Completers With College Credit Certificates, by College.....	35
Table 7:	Level of Public Assistance, by Credential	37
Table 8:	Completers With Career Certificates Who Received Public Assistance, by District Technical Center.....	38
Table 9:	Completers With Career Certificates Who Received Public Assistance, by College	40
Table 10:	Graduates and Completers With College Credit Certificates Who Received Public Assistance, by College.....	41
Table 11:	Percentage of Students With Bachelor’s Degrees Who Were Enrolled in Continuing Education, by University	52
Table 12:	Percentage of Students With Bachelor’s Degrees Who Were Enrolled in Continuing Education, by Popular Area of Study.....	53
Table 13:	Bachelor’s Degrees Awarded by Colleges in Florida, by Area of Study	55
Table 14:	Median First-Year Earnings of Graduates With Bachelor’s Degrees Awarded by Colleges, by Area of Study	56
Table 15:	Median First-Year Earnings of Graduates With Professional Degrees, by Degree and University	65
Table 16:	Non-Agricultural Employment in Florida, by Industry, April 2015 (Seasonally Adjusted)	69

Table 17: Forecast of the Fastest Growing Industries in Florida Through 2022.....	71
Table 18: Forecast of the Industries Gaining the Most New Jobs in Florida Through 2022	72
Table 19: Forecast of the Fastest Growing Occupations in Florida Through 2022	73
Table 20: Supply Gap in 15 Occupations Requiring Postsecondary Credentials	74
Table 21: Match Rate for Graduates of Universities, by Institution	76
Table 22: Match Rate for College Graduates and Completers, by Degree and Institution	76
Table 23: Match Rate for Completers of Career Certificates, by District Technical Center	81

Executive Summary

This report results from a partnership between the State of Florida and College Measures. It focuses on the median first-year earnings of recent graduates and completers¹ from Florida's public postsecondary educational institutions: State University System of Florida (SUS), Florida College System (FCS), and District Technical Centers (DTCs).² The report documents the variation in first-year earnings among completers who earned degrees or certificates from these three systems of postsecondary education. The report also presents data on the percentage of completers from various institutions that are receiving public assistance, as well as the percentage enrolled in continuing education programs. Debt accumulated by all students (not just graduates) is also reported. The results show that the types of postsecondary credentials that completers earn, and where they earn them, matter.

Information in this report comes from three main data sources: the Florida Education and Training Placement Information Program (FETPIP) from the Florida Department of Education, the Wage Record Interchange System 2 (WRIS2),³ and the Florida Department of Education's Office of Student Financial Assistance. The data discussed in this report reflect outcomes for graduates and completers in their first year after graduation for a five-year period from academic years 2008–09 to 2012–13. Although the data represent employment and earnings outcomes, the data do not include information about the occupations of completers and whether they are employed in their fields of study.

- 1 In this report, "graduates" is a specific term used to identify any person who has earned a degree (e.g., associate's, bachelor's, or master's). "Completers" is a more general term used to identify any person who has completed any level of postsecondary education (e.g., certificates, diplomas, bachelor's degrees, etc.).
- 2 The SUS includes 12 public universities. The FCS is comprised of 28 public community colleges and state colleges, some of which offer four-year bachelor's degrees. Forty-eight DTCs in the state offer certifications in a variety of career and technical education program areas. These three systems comprise Florida's public postsecondary educational system.
- 3 The WRIS2 program is a voluntary system whereby states can share aggregate employment and wage outcomes with other states. This allows us to report on the employment and earnings data of graduates from the State of Florida who are employed in other states. Currently, 39 states, plus Washington, DC, and Puerto Rico, participate in WRIS2. A map of participating states can be found at http://www.doleta.gov/performance/pfdocs/WRIS2_Map_Aug_2015.pdf. Florida's neighboring states, Georgia and Alabama, are not currently members of WRIS2.

Florida College System and District Technical Centers

- The bachelor's degree and the associate of arts (A.A.) degree are the two most commonly awarded degrees in Florida. The A.A. degree is designed as a pathway to the bachelor's degree. The median first-year earnings of graduates with A.A. degrees are usually lower than those of graduates from many other degree and certificate programs.
- Field of study can greatly affect early career earnings. The median first-year earnings of a graduate with an A.S. degree in Child Care Provider/Assistant were around \$25,000. A graduate with an A.S. degree in Nursing can earn almost twice as much, and a graduate who earns an A.S. degree in Emergency Medicine Technology–Paramedic can earn even more.
- Median first-year earnings vary across programs awarding the same degree in the same field of study. For example, median first-year earnings for Emergency Medicine Technology–Paramedic ranged from less than \$50,000 (Florida Community College at Jacksonville, Seminole State College of Florida, North Florida Community College, and College of Central Florida) to more than \$64,000 or more (Hillsborough Community College and Broward College).
- The average federal debt level per student in 2012–13 across Florida's colleges ranged from less than \$2,000 (Hillsborough Community College and Seminole State College of Florida) to more than \$4,000 (State College of Florida, Manatee-Sarasota).
- DTCs issued far more career certificates than colleges in the State of Florida. Career certificates issued by DTCs accounted for more than 60 percent of all certificates awarded in the state.
 - However, completers with certificates from Florida's colleges were more successful at obtaining employment (76 percent) than completers with career certificates from DTCs (68 percent).
 - In addition, across the five-year period of study, median first-year earnings of graduates and completers from FCS were higher (\$34,218) than the earnings of completers with certificates from DTCs (\$27,584). Several factors could be at play here. For example, colleges tend to enroll a much higher percentage of students in programs that traditionally have higher placement rates and earnings, such as Law Enforcement Officer.
- More than 20 percent of completers who earned career certificates from DTCs received public assistance, almost double the percentage of those who earned their degrees and certificates from institutions in the FCS.
- Students who earned associate's degrees were less likely to have received public assistance than students who earned certificates.

State University System of Florida Degrees and Florida College System Bachelor's Degrees

- Median first-year earnings of graduates with bachelor's degrees varied from about \$23,500 (New College of Florida) to more than \$35,000 (Florida Atlantic University, Florida International University). Some of this variation is related to the economic climate in the areas of the state which these campuses serve and where students choose to work.
- The median first-year earnings of bachelor's graduates from five universities (University of Central Florida, University of Florida, Florida Gulf Coast University, University of South Florida, and University of North Florida) were within \$1,000 of the state median, suggesting there are many university-based pathways into the labor market that employers value at roughly the same level.
- Psychology is one of the most popular fields of study in state universities. But graduates with degrees in Psychology tended to have low first-year earnings, around \$6,500 less than the statewide median. Graduates with degrees in Biology, Criminal Justice, and English Language and Literature also fell at the bottom of the earnings distribution.
- Graduates with degrees in business-related fields—such as Business Administration, Finance, and Accounting—had, on average, high first-year earnings. However, the median first-year earnings of graduates with degrees in Marketing, another business-related field, were not as high.
- Among the more popular bachelor's degree programs in the state, graduates with degrees in Elementary Education and Teaching had the second highest median first-year earnings, exceeded only by graduates with degrees in Accounting.
- The median statewide federal loan amount per student was slightly more than \$6,000. Federal debt for students ranged from an average of around \$3,600 (New College of Florida) to more than \$8,800 (University of Florida). Because this includes both graduate and undergraduate students, average debt may be higher in research universities, such as Florida State University and University of Florida. Moreover, this is only federally issued debt, and other sources of student loans were not included in this estimate.
- During the five-year study period, campuses in the FCS awarded more than 14,000 bachelor's degrees. These degrees were concentrated in a small number of relatively high-paying fields. In turn, the median first-year earnings of graduates with bachelor's degrees from Florida's colleges (around \$41,000) were higher than those of graduates with bachelor's degrees from Florida's universities (around \$34,000).

- Graduates with master's degrees earned more, often far more, than graduates with only bachelor's degrees. The median first-year earnings of graduates with master's degrees in Florida were around \$49,000 compared with approximately \$34,000 for graduates with bachelor's degrees.

Where the Jobs Are

The report also presents data on the industries and occupations that are likely to be most in demand.

- Three of the four industries with the fastest growth in Florida are related to construction. With annual growth of 4.7 percent, the field of Construction of Buildings is projected to grow the fastest through 2022.
- The health care industry is also projected to expand rapidly due to population growth, the aging population, and improved medical technologies.
- Another way to look at where the jobs are is to see which industries will be creating the most new jobs, regardless of the growth rate. Some fast-growing industries employ only a relatively small number of people; others are much larger. For example, Ambulatory Health Care Services and Professional, Scientific, and Technical Services are expected to add many new jobs, and both have high rates of growth. In contrast, two industries, Hospitals and Administrative and Support Services, have lower rates of growth, but because they are such large industries, they will add many more jobs than most of the faster growing industries.
- Some occupations have a greater demand relative to supply. For example, during 2013–14, Florida's postsecondary educational institutions awarded approximately 600 academic credentials for physical therapy. However, the industry demand is estimated to be around 1,500 therapists during this time, leaving a shortage of almost 900 trained individuals. Physical therapists are well paid.
- Looking forward, between 2014 and 2022, Florida's colleges and universities will produce far fewer academic credentials for Securities and Financial Service Sales Agents than the projected industry demand, resulting in a shortage of some 1,100 trained graduates. These graduates are also well compensated.

**More findings are available at:
<http://www.beyondeducation.org/esm>**

In addition to <http://www.beyondeducation.org/esm>, more information is also available at the following sites:

- What People Are Asking (<http://www.whatpeopleareasking.com/index.shtm>) contains job and wage data by area in Florida. It features hot jobs, what these jobs pay, and other information of interest to students and parents.
- Smart College Choices from the Florida Department of Education (<http://smart-college-choices.com/>) provides outcome data on graduates of FCS institutions and DTCs.

Introduction

This report results from a partnership between the State of Florida and College Measures. It focuses on the median first-year earnings of recent graduates and completers from Florida's public postsecondary educational institutions: SUS, FCS, and DTCs. The report documents the variation in first-year earnings for completers who earned degrees or certificates from these three postsecondary education systems. The report also presents data on other outcomes, such as the percentage of completers who enrolled in further education or the percentage receiving public welfare. The report presents these data for *programs* not just *institutions* and shows that the type of postsecondary credential that completers earn, and where they earn them, matter. The report begins by examining Florida's colleges and DTCs and then focuses on bachelor's degrees granted by Florida's universities. The earnings of completers of Florida's professional programs are also reported. The report concludes with a forecast of the occupations in which employment growth is most likely to occur.

Florida Colleges and District Technical Centers

Florida's public postsecondary system includes institutions in the FCS and DTCs, which are operated by school districts. FCS institutions offer a variety of programs, from bachelor's degrees and A.A. degrees to career and technical programs. DTCs offer only career and technical education (CTE) programs.

The A.A. degree is designed for students who intend to earn a bachelor's degree later. CTE programs, such as the associate of applied science (A.A.S.) and A.S. degrees, are designed for students who are seeking employment immediately after graduation. These associate's degree programs are generally designed as two-year courses of study, although students often take longer to successfully complete them.

Career certificate and college credit certificate programs are available in many specialties for students who want to spend less than two years in career preparation. Certificate programs fall into several categories:

- **Career certificate.** A career certificate program is a series of vocational courses that prepares students for entry level employment in a specific career field. The programs vary in length from 40 hours to more than 1,500 hours. Colleges and DTCs offer these certificate programs as non-college credit. Examples of career certificates include correctional probation officer, cosmetologist, culinary operator, firefighter, medical assistant, and practical nurse.

- **Applied technology diploma.** The applied technology diploma is a course of study that is part of an A.S. or A.A.S. degree program. The course of study is less than 60 credit hours and is designed to lead to employment in a specific occupation. Colleges and DTCs offer these diploma programs as non-college credit. Examples include dental assistant and emergency medical technician.
- **Apprenticeship.** An apprenticeship is a combination of on-the-job training and related classroom instruction in which students learn the practical and theoretical aspects of a highly skilled occupation. Programs are sponsored by apprenticeship organizations in partnership with colleges and DTCs.
- **College credit certificate.** A college credit certificate program is a series of college-credit courses that prepares students for entry-level employment in a specific career field or for career advancement. Generally, these certificates can be completed in one year or less. College credit certificate programs must be part of an A.S. or A.A.S. degree program. Examples include information technology technician and computer programmer. College credit certificates may also be called postsecondary vocational certificates.

The data discussed in this report reflect outcomes for graduates and completers in their first year after graduation for a five-year period from academic years 2008–09 to 2012–13. As noted in the following pages, postcompletion earnings vary among students who finish with different credentials. In addition, longer courses of study do not always lead to higher earnings.

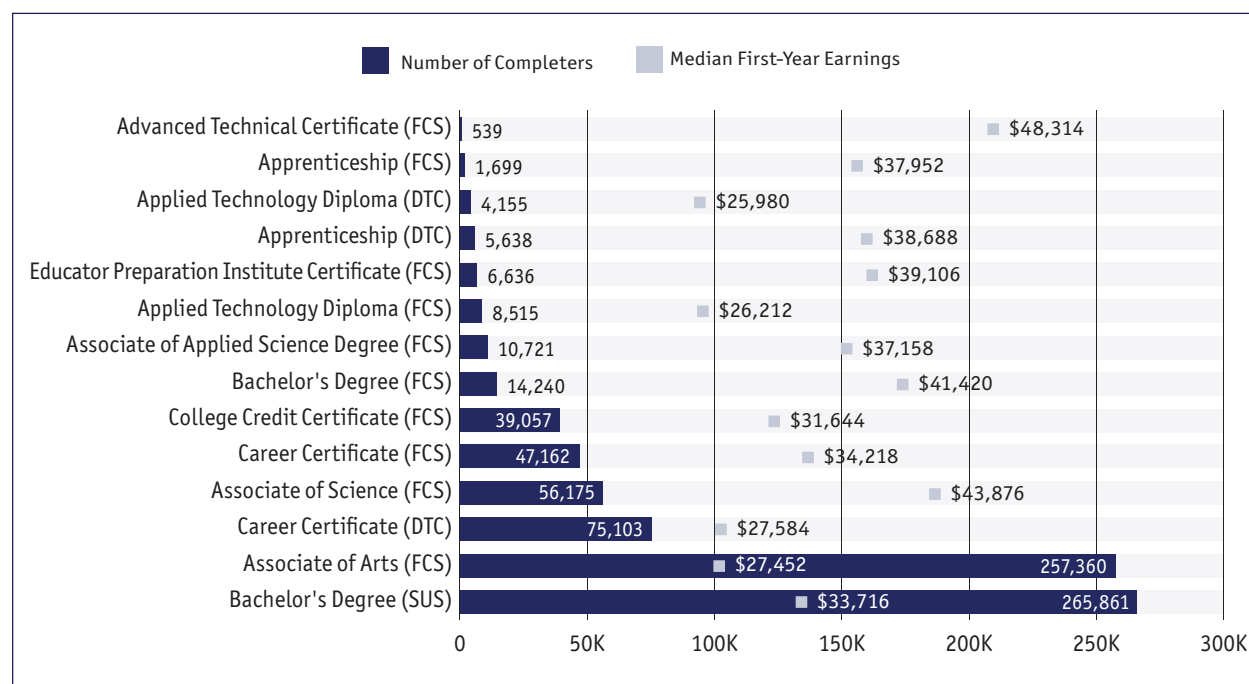
Although this section focuses on associate’s degrees and CTE program credentials, as a point of reference, Figure 1 shows the number of postsecondary academic credentials awarded by Florida institutions during the five-year study period. The two most commonly awarded credentials in Florida were the bachelor’s degree and the A.A. degree. The A.A. degree is designed as a pathway to a bachelor’s degree. Compared with these two degrees, far fewer students completed career- and technical-oriented programs of study. For example, more than 257,000 A.A. degrees were awarded during the study period, compared with approximately 56,000 A.S. degrees and slightly less than 11,000 A.A.S. degrees. Together, Florida’s colleges and DTCs awarded more than 120,000 career certificates, and colleges also awarded more than 39,000 college credit certificates. This is consistent with a national trend in the rapid growth of career-oriented certificates, many of which have considerable value in the job market.

Figure 1 also shows the median first-year earnings associated with each career- and technical-oriented credential. The lowest earnings were associated with completers of an applied technology diploma. Some of these completers may still be attending school while in the job market, thus lowering their earnings. With that in mind, the median first-year earnings of graduates with an A.S. degree were almost \$18,000 more than those of completers with an applied technology

diploma and more than \$10,000 *higher* than graduates with a bachelor's degree from an institution in the SUS. The median first-year earnings of graduates with an A.S. degree were also higher than those of graduates who completed the far less common A.A.S. degree.

Completers of certificate courses, on average, had higher first-year earnings than graduates with A.A. degrees. The median first-year earnings of graduates with A.A. degrees (\$27,452) were lower than that of completers with career certificates from Florida's colleges (\$34,218) and from career and technical education schools (\$27,584). However, completers of certificate courses, on average, had lower median first-year earnings than graduates with A.S. degrees (\$43,876) and A.A.S. degrees (\$37,158). The highest median first-year earnings (\$48,314) were achieved by the nearly 540 completers of advanced technical certificates.

Figure 1: Number of Postsecondary Academic Credentials Awarded and Median First-Year Earnings, Academic Years 2008–09 Through 2012–13



Variation in First-Year Earnings of Graduates With Associate Degrees

Associate of Arts Degree

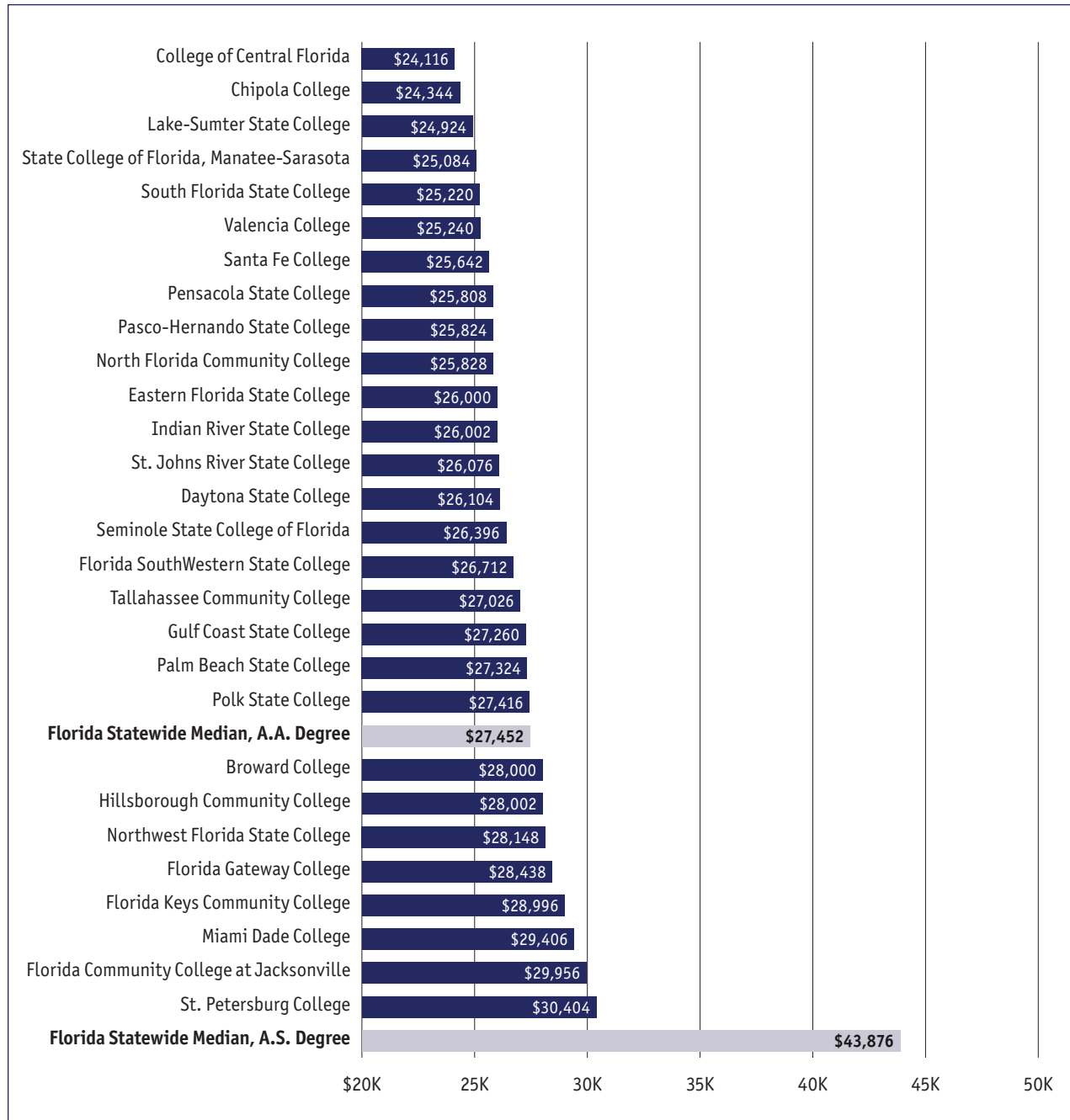
After the bachelor's degree, the most common degree granted in Florida is the A.A. degree. Almost 260,000 A.A. degrees were awarded during the five-year study period. The A.A. degree is designed for students who plan to attend a four-year institution as a junior and complete a bachelor's degree program. The A.A. degree requires 36 credit hours of general education and 24 credit hours of electives.

As shown in Figure 1, the median first-year earnings of all graduates with A.A. degrees were slightly less than \$27,500. Figure 2 displays the median first-year earnings of graduates with A.A. degrees from specific colleges in Florida.⁴ More than \$6,000 separates the median first-year earnings of graduates from the college with the lowest (College of Central Florida, \$24,116) and highest earning graduates with A.A. degrees (St. Petersburg College, \$30,404). However, the median first-year earnings of graduates from most colleges in the state were within \$3,000 of the state median.

At no college did the median first-year earnings of graduates exceed \$30,452, which is the state median plus \$3,000. However, the median first-year earnings of graduates from two colleges (Chipola College and the College of Central Florida) were less than \$24,452, which is the state median minus \$3,000. Although this report does not explain these differences, note that Chipola College and South Florida State College are located in rural areas of the state where median earnings may be lower than those in urban areas. In contrast, the two schools (Florida Community College at Jacksonville and St. Petersburg College) from which graduates who completed A.A. degrees earned the most are located in large metropolitan areas. Graduates of schools in urban areas who stay in those urban areas may have higher earnings.

⁴ On July 1, 2014, Edison State College changed its name to Florida SouthWestern State College, which is the name used throughout this report.

Figure 2: Median First-Year Earnings of Graduates With A.A. Degrees, by College

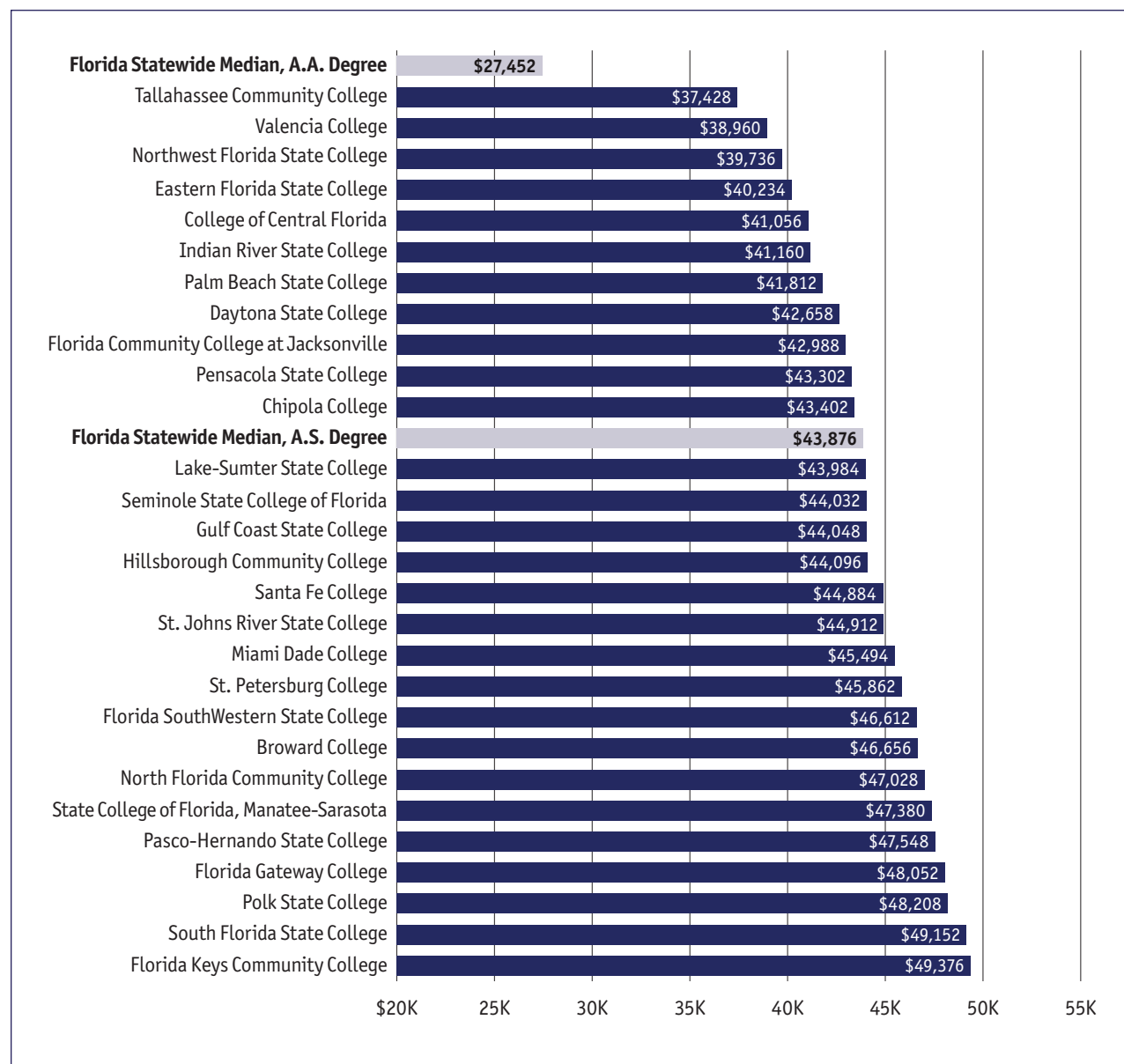


Associate of Science Degree

After the A.A. degree, the next most common two-year degree awarded in Florida is the A.S. degree. About 56,000 A.S. degrees were awarded during the five-year study period. A.S. degree programs, like other CTE programs, are designed to prepare students who are planning to enter a specific occupation.

As shown in Figure 3, the median first-year earnings of graduates with A.S. degrees were far higher (nearly \$44,000) than those earned by graduates with A.A. degrees (nearly \$27,500). The median first-year earnings of graduates with A.S. degrees varied substantially across colleges in Florida. At the high end, graduates with A.S. degrees from two colleges (Florida Keys Community College and South Florida State College) had median first-year earnings above \$49,000. In contrast, graduates with A.S. degrees from only three colleges (Tallahassee Community College, Valencia College, and Northwest Florida State College) had median first-year earnings less than \$40,000.

Figure 3: Median First-Year Earnings of Graduates With A.S. Degrees, by College

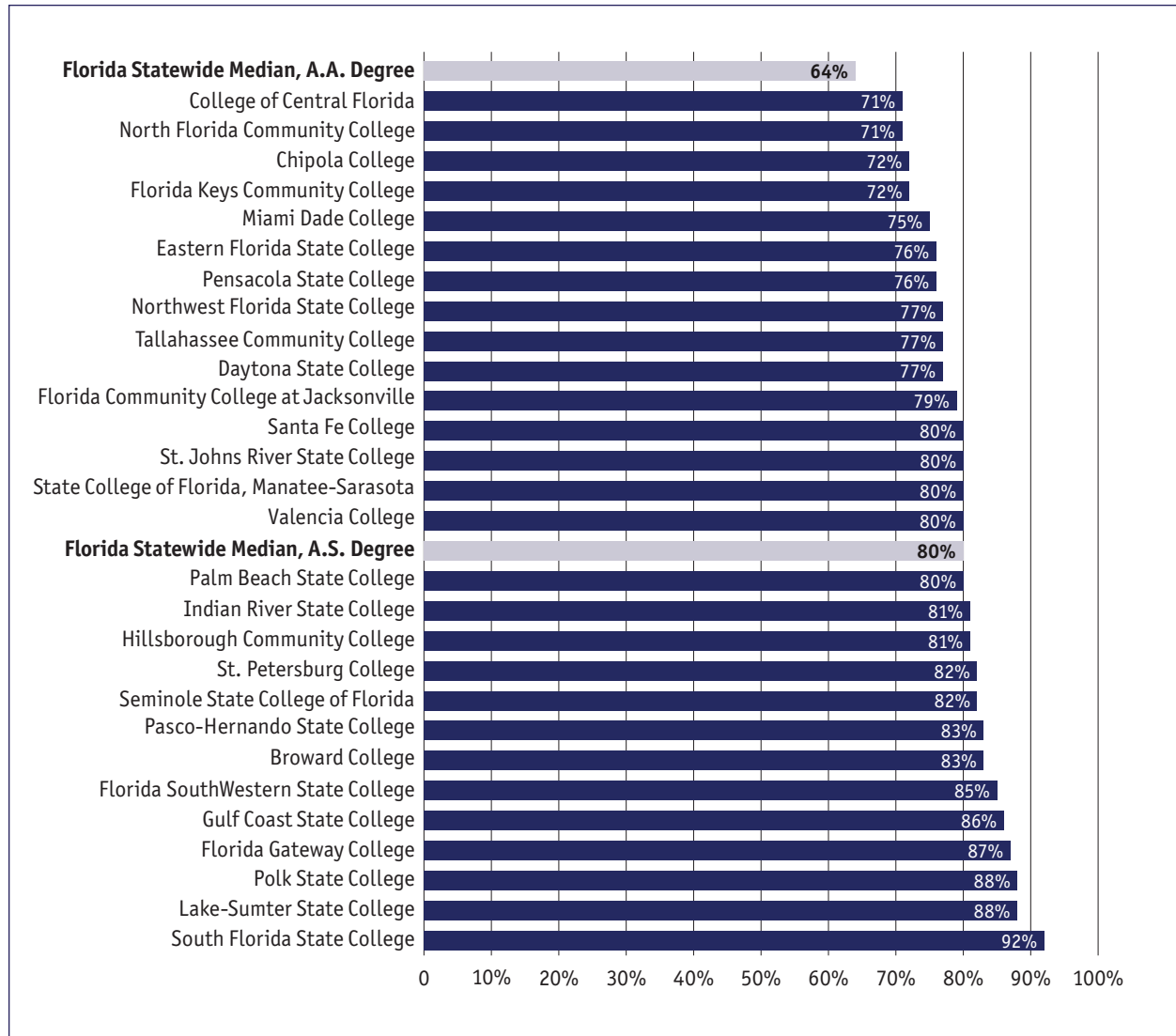


Employment Outcomes of Graduates With A.S. Degrees

Figure 4 shows the percentage of graduates with A.S. degrees who were employed one year after graduation, as reported in wage data from the Florida Unemployment Insurance (UI) and WRIS2 systems.⁵ About 80 percent of graduates with A.S. degrees were employed, but that percentage varied by institution, ranging from 71 percent to 92 percent. Overall, graduates with A.S. degrees were employed at higher rates than the statewide median rate for graduates with A.A. degrees. This is not surprising because A.S. degrees are designed for students who plan to enter employment, while A.A. degrees are designed for students who plan to earn a four-year bachelor's degree from a college or university.

5 The WRIS2 program is a voluntary system whereby states can share aggregate employment and wage outcomes with other states. This allows us to report on the employment and earnings data of graduates from the State of Florida who are employed in other states. Currently, 39 states, plus Washington, DC, and Puerto Rico, participate in WRIS2. A map of participating states can be found at http://www.doleta.gov/performance/pfdocs/WRIS2_Map_Aug_2015.pdf. Florida's neighboring states, Georgia and Alabama, are not currently members of WRIS2.

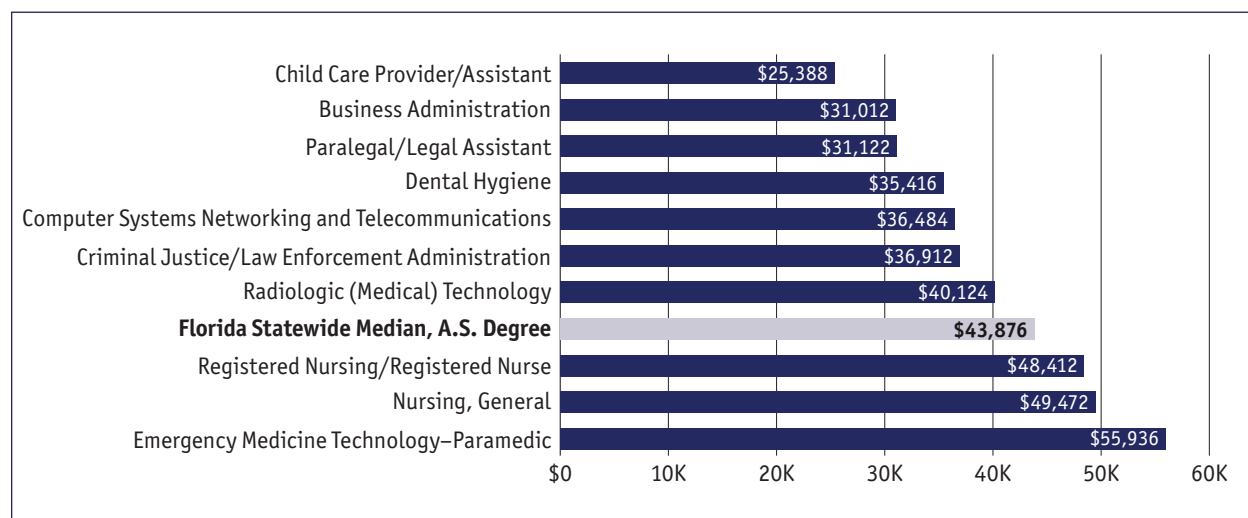
Figure 4: Employment Rates Among Graduates With A.S. Degrees, by College



What Students Study Matters

Graduates with A.A. degrees are classified into a single program of study (Liberal Arts and Sciences/Liberal Studies⁶). However, graduates with A.S. degrees are classified across a range of programs of study, and graduates from some programs earn far more than graduates from other programs. Figure 5 identifies the median first-year earnings of graduates with A.S. degrees in the most popular programs of study. Median first-year earnings ranged from a low of \$25,388 (Child Care Provider/Assistant) to more than double that at \$55,936 (Emergency Medicine Technology–Paramedic).

Figure 5: Median First-Year Earnings of Graduates With A.S. Degrees in the Most Popular A.S. Programs of Study Among Colleges in Florida



As evident in Table 1, first-year earnings and rates of employment differ among graduates with A.S. degrees across programs at FCS institutions. Seventy percent of graduates with A.S. degrees in Business Administration were employed one year after graduation. Similarly, slightly more than 70 percent of graduates with A.S. degrees in Child Care Provider/Assistant or Computer Systems Networking and Telecommunications were employed. In contrast, more than 80 percent of graduates in health care-related professions, such as Emergency Medicine Technology–Paramedic, were employed. These types of data are potentially powerful for students who are interested in the prospects of the earnings of graduates with A.S. degrees from specific programs from specific colleges.

⁶ This classification and information about all other fields of study used in this report are defined by the U.S. Department of Education's Classification of Instructional Programs (CIP) Code.

Table 1: Employment Outcomes for Graduates and Completers With A.S. Degrees in the Most Popular A.S. Programs of Study Among Colleges in Florida

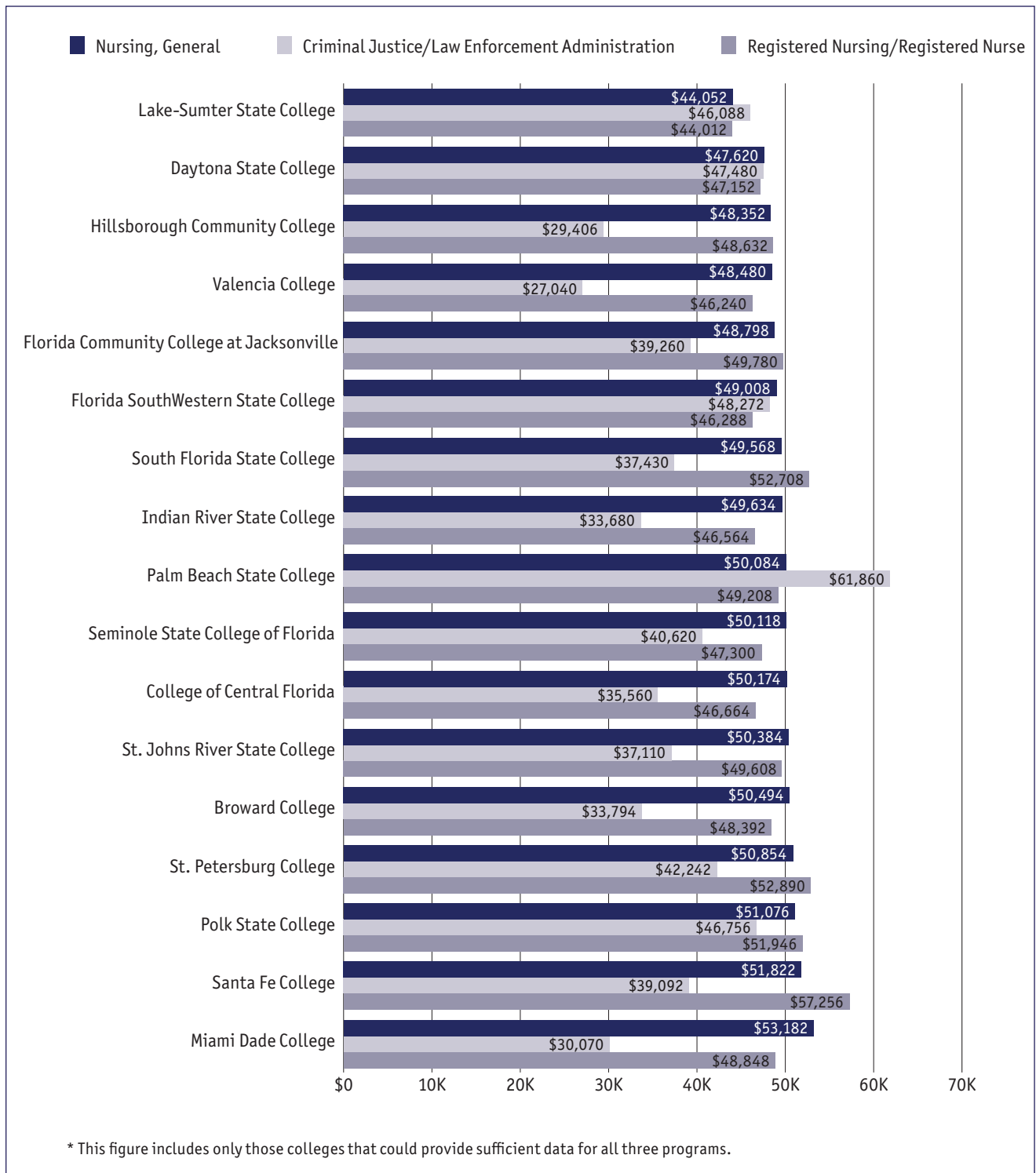
A.S. Degree Program	Number of Completers	Number Employed	Percent Employed
Business Administration	1,172	815	70%
Child Care Provider/Assistant	1,099	776	71%
Computer Systems Networking and Telecommunications	1,222	874	72%
Paralegal/Legal Assistant	1,634	1,227	75%
Criminal Justice/Law Enforcement Administration	2,114	1,658	78%
Florida	56,175	44,898	80%
Dental Hygiene	1,091	892	82%
Radiologic (Medical) Technology	1,242	1,029	83%
Registered Nursing/Registered Nurse	4,838	4,220	87%
Nursing, General	17,400	15,230	88%
Emergency Medicine Technology–Paramedic	1,780	1,601	90%

Figure 6 displays the median first-year earnings of graduates with A.S. degrees from the three most popular programs in the state (Registered Nursing/Registered Nurse, Criminal Justice/Law Enforcement Administration, and Nursing, General) across the 17 colleges in Florida with sufficient data to meet reporting requirements. The variation across programs shows why this level of analysis is important.

Apart from four colleges (Palm Beach State College, Lake-Sumter State College, Florida SouthWestern State College, and Daytona State College), median first-year earnings of graduates with degrees in Criminal Justice/Law Enforcement Administration were lower, often significantly, than those of graduates with degrees in Registered Nursing/Registered Nurse and Nursing, General. That said, median first-year earnings among graduates of Criminal Justice/Law Enforcement Administration programs varied considerably across colleges, from less than \$30,000 (Valencia College and Hillsborough Community College) to nearly \$62,000 (Palm Beach State College). Again, these differences are likely affected by the location of the colleges (e.g., areas in the larger and higher paying regional economies of Florida’s southeast coast).

The range in first-year earnings was somewhat narrower among graduates of nursing programs. For Nursing, General, such earnings ranged from about \$44,000 (Lake-Sumter State College) to more than \$51,000 (Miami Dade College, Santa Fe College, and Polk State College). For Registered Nursing/Registered Nurse, first-year earnings ranged from about \$44,000 (Lake-Sumter State College) to more than \$57,000 (Santa Fe College).

Figure 6: Median First-Year Earnings of Graduates With A.S. Degrees in the Three Most Popular A.S. Programs of Study Among Colleges* in Florida



Associate of Applied Science Degree

More than 10,000 students in Florida earned A.A.S. degrees from academic year 2008–09 to 2012–13. A.A.S. degrees focus on training students for careers in high-technology industries.

The median statewide earnings of graduates with A.A.S. degrees were \$37,158, almost \$10,000 higher than those of graduates with A.A. degrees (\$27,452) but more than \$6,000 lower than those with A.S. degrees (\$43,876). The range in median first-year earnings among graduates with A.A.S. degrees varied substantially, from around \$29,000 (Pasco-Hernando State College) to nearly \$47,000 (South Florida State College) (Figure 7).

Graduates with A.A.S. degrees from two colleges (Pasco-Hernando State College and Valencia College) had median first-year earnings of less than \$30,000. In contrast, the median first-year earnings of graduates with A.A.S. degrees from two other colleges (State College of Florida, Manatee-Sarasota and South Florida State College) were more than \$46,000. Again, these differences are affected by the distribution of graduates across programs, where graduates earn high-paying versus low-paying wages in the labor market, and by the location of the college (e.g., rural vs. urban areas and those in the larger and higher paying regional economies of Florida's southeast coast).

Figure 7: Median First-Year Earnings of Graduates With A.A.S. Degrees, by College

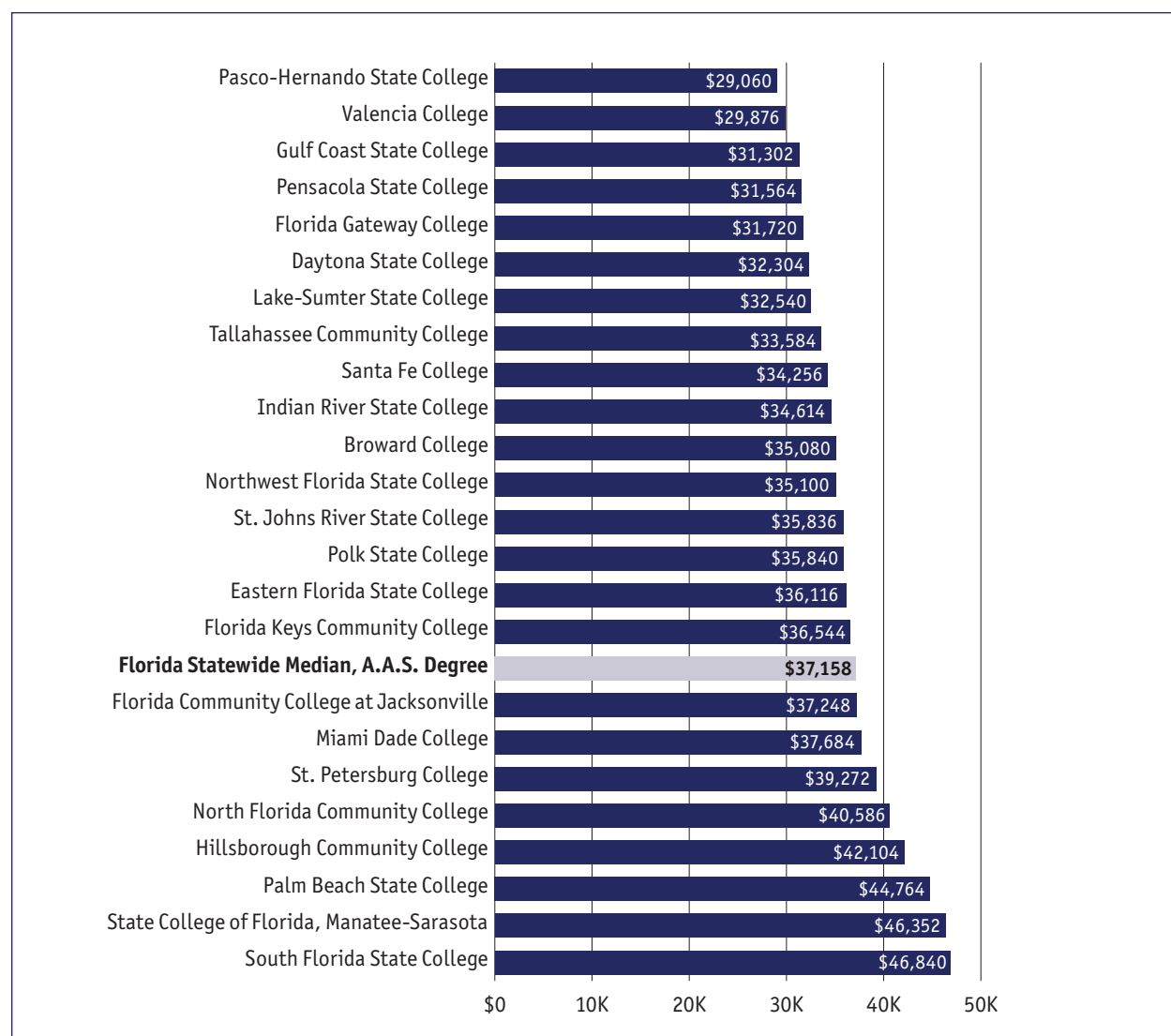


Table 2 shows employment outcomes for graduates with A.A.S. degrees from FCS institutions. In two of the colleges (Florida Gateway College and Pensacola State College), fewer than 70 percent of graduates with A.A.S. degrees were employed, according to the employment database. At the high end of the scale, 100 percent of graduates from North Florida Community College and more than 85 percent of graduates from three colleges (Polk State College, South Florida State College, and St. Johns River State College) were employed. Some colleges, such as Tallahassee Community College and Pensacola State College, are located close to Florida's border with Georgia and Alabama, neither of which participates in WRIS2.

Table 2: Employment Outcomes for Graduates with A.A.S. Degrees, by College

Institution	Number of Completers	Number Employed	Percent Employed
Florida Gateway College	25	16	64%
Pensacola State College	1,220	810	66%
Pasco-Hernando State College	111	78	70%
Lake-Sumter State College	162	115	71%
Eastern Florida State College	213	153	72%
Gulf Coast State College	437	318	73%
Daytona State College	1,012	737	73%
Northwest Florida State College	1,035	756	73%
Santa Fe College	271	200	74%
Valencia College	265	197	74%
Tallahassee Community College	129	96	74%
Indian River State College	778	580	75%
Florida Community College at Jacksonville	735	559	76%
St. Petersburg College	51	39	76%
Broward College	855	656	77%
Florida Keys Community College	15	12	80%
Palm Beach State College	506	405	80%
Miami Dade College	204	165	81%
State College of Florida, Manatee-Sarasota	1,281	1,038	81%
Hillsborough Community College	700	588	84%
Polk State College	304	260	86%
St. Johns River State College	48	42	88%
South Florida State College	338	297	88%
North Florida Community College	16	16	100%

Note: Results for College of Central Florida and Seminole State College of Florida are not reported here because each college had fewer than 10 completers or employed completers.

Figure 8 shows a wide range in median first-year earnings among graduates with A.A.S. degrees in the most popular A.A.S. fields of study in the state. Median first-year earnings ranged from around \$27,000 (Executive Secretarial) to more than \$47,000 (Nursing, General and Electrical, Electronic, and Communications Engineering Technology/Technician). Median first-year earnings in five other fields exceeded the statewide median for A.A.S. degrees: Radiologic (Medical) Technology, Criminal Justice/Law Enforcement Administration, Trade and Industrial Management, Respiratory Therapy, and Physical Therapy Assistant.

In contrast and notably, graduates with A.A.S. degrees in Business Administration generally had median first-year earnings below the median of all graduates with A.A.S. degrees.

Figure 8: Median First-Year Earnings of Graduates With A.A.S. Degrees in the Most Popular A.A.S. Fields of Study in Florida

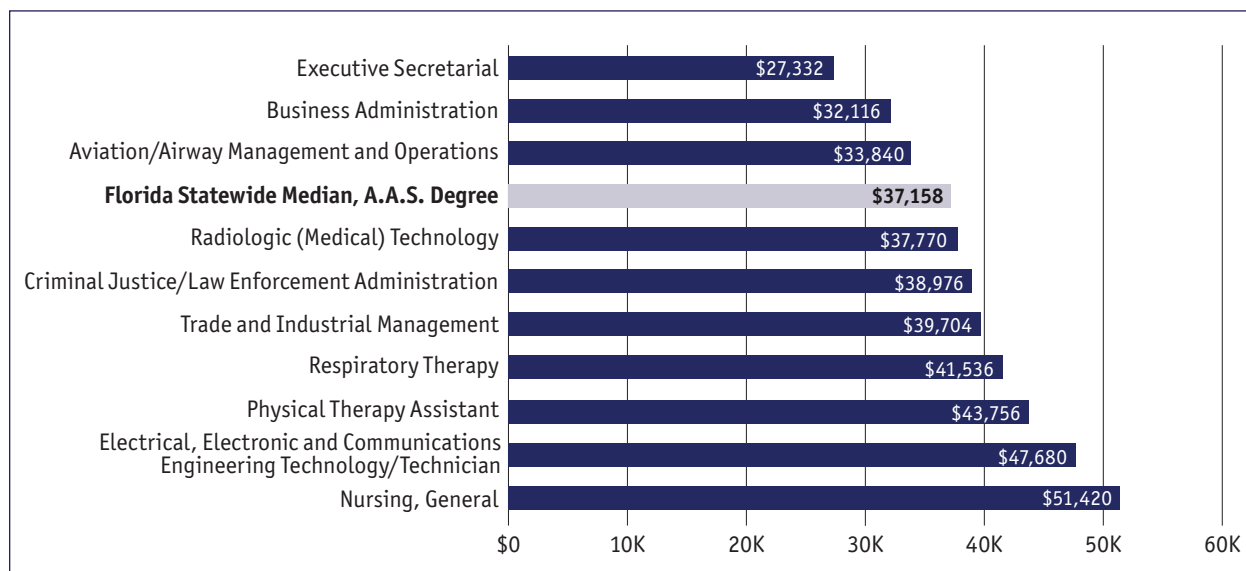
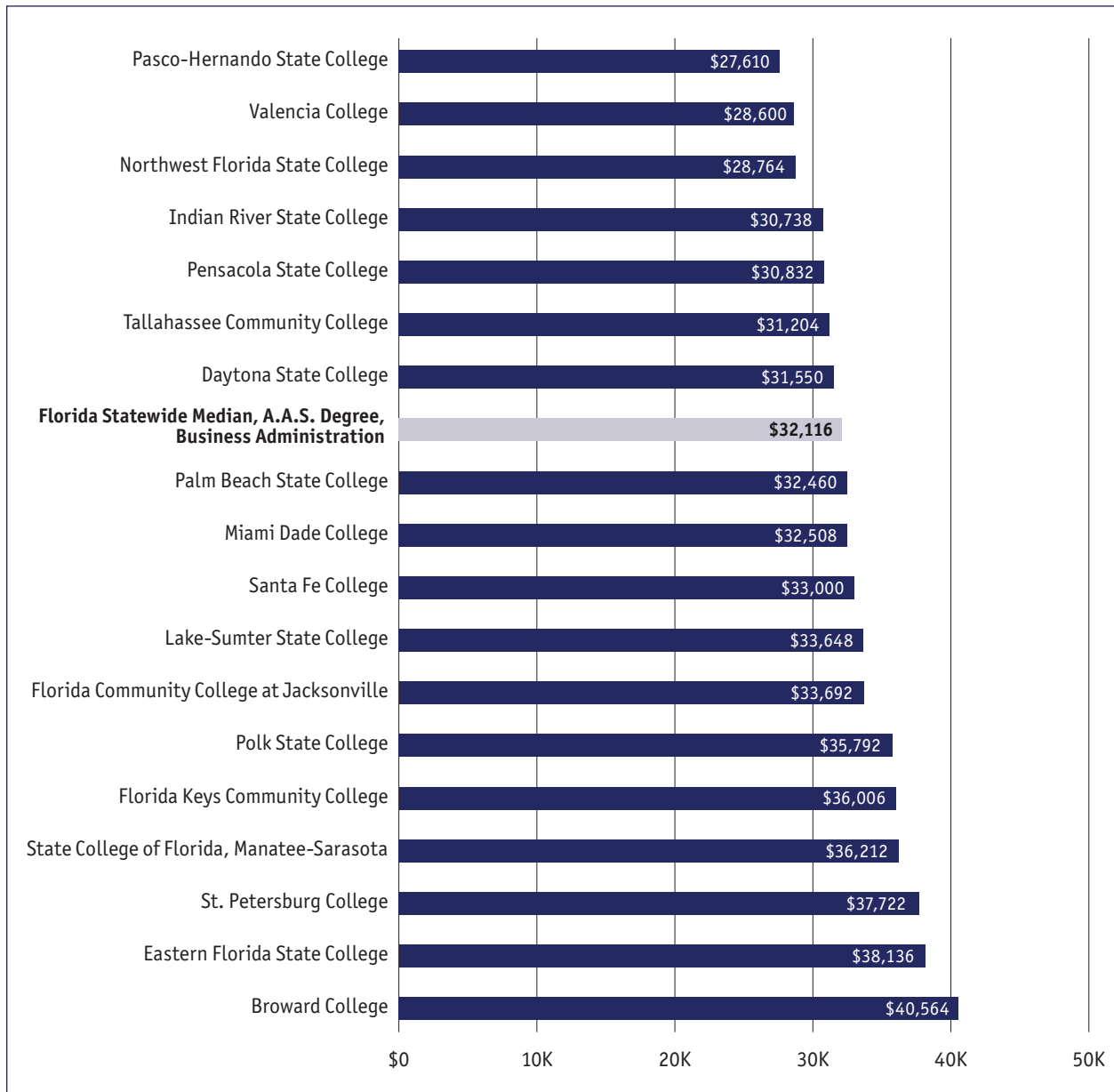


Figure 9 reports the range of median first-year earnings of graduates with A.A.S. degrees in Business Administration across the 18 colleges that met reporting requirements. Almost \$13,000 separated Pasco-Hernando State College, whose graduates had the lowest median first-year earnings, from Broward College, whose graduates had the highest. The median first-year earnings of graduates with A.A.S. degrees in Business Administration from three colleges are less than \$30,000 (Pasco-Hernando State College, Valencia College, and Northwest Florida State College). In contrast, graduates of Broward College had earnings of more than \$40,000, and for five other colleges (Polk State College; Florida Keys Community College; State College of Florida, Manatee-Sarasota; St. Petersburg College; and Eastern Florida State College), median first-year earnings of graduates with A.A.S. degrees in Business Administration exceeded \$35,000.

Figure 9: Median First-Year Earnings of Graduates With A.A.S. Degrees in Business Administration, by College

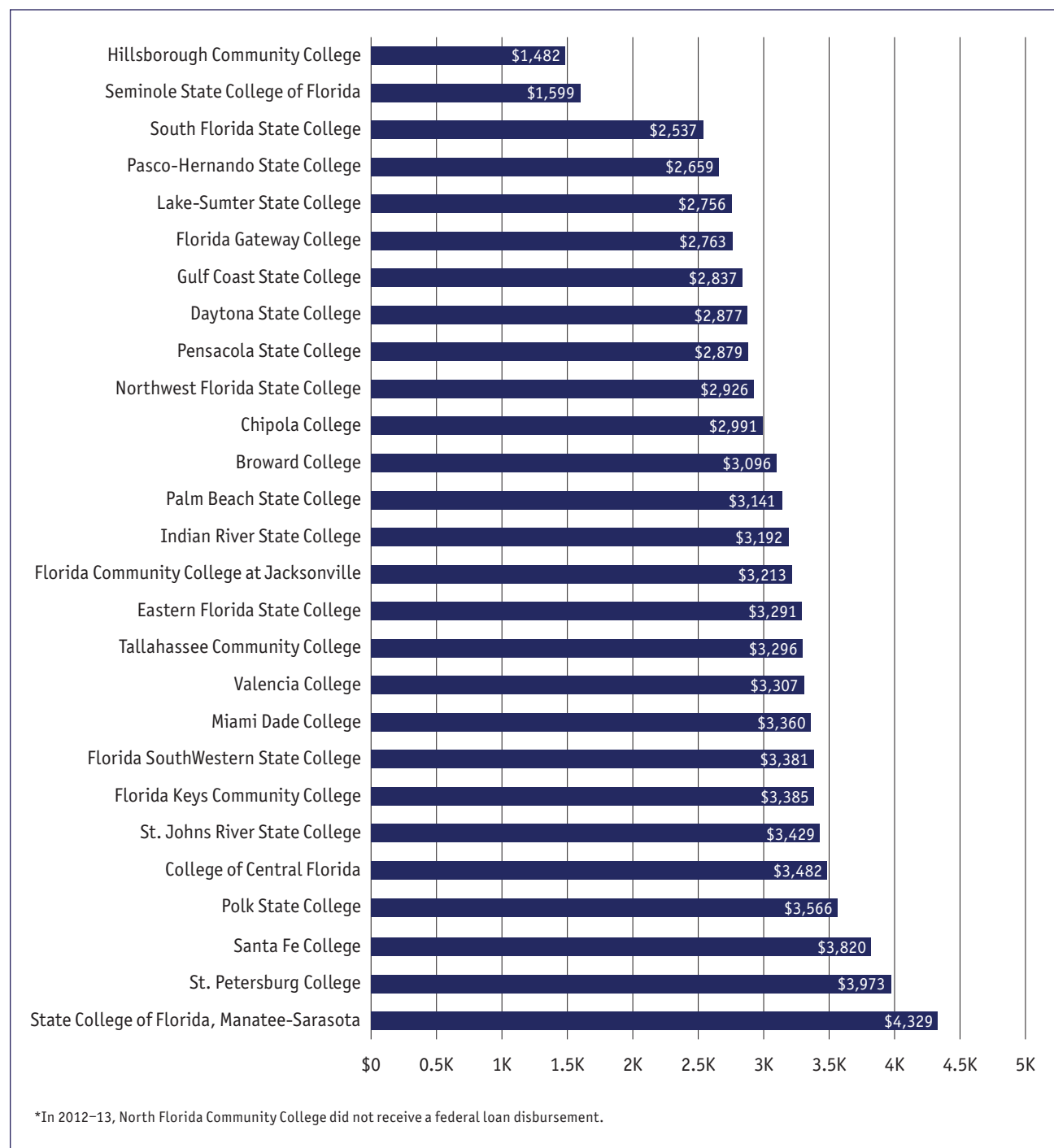


Debt Levels by College

The amount of student debt is a growing concern in Florida and across the nation. Compared with students who are pursuing bachelor's or advanced degrees, debt is not always a concern for those enrolled in shorter degree programs. Nonetheless, many students in colleges in Florida are taking out loans to help pay for their education. Figure 10 shows the average federal debt level per student in 2012–13 at each college in Florida. The range varies from less than \$2,000 per student (Hillsborough Community College and Seminole State College of Florida) to more than \$4,000 per student (State College of Florida, Manatee-Sarasota).

Each college self-reports data about debt to Florida's Department of Education, Office of Student Financial Assistance. The data reflect the average federal student loan debt of all students (not just graduates) receiving federal loans in 2012–13. Data also include federal student loans from Stafford, Perkins, Graduate PLUS, Parent PLUS, and TEACH programs. The average student loan debt represents the total amount of student loans for 2012–13 at each college, divided by the number of students receiving federal loans that academic year. The average does not include private loans or other debt issued by nonfederal government sources that students may have sought to help finance their education.

Figure 10: Average Federal Loan Amount per Student, by College, 2012–13*



Career Certificates and College Credit Certificates

Large numbers of students enroll in Florida's public postsecondary institutions to earn certificates or diplomas. Two of the most popular programs are career certificates and college credit certificates.⁷

This section highlights key patterns in all certificates awarded to more than 160,000 students during the five-year study period. Details about all programs, including those not analyzed in this report, are available at <http://www.beyondeducation.org>.

Career Certificates

Career certificate programs consist of a series of technical (non-college credit) courses that are designed to prepare students for entry-level employment in specific career fields (e.g., cosmetology, law enforcement, practical nursing). Institutions in the FCS and DTCs award these types of certificates. There are systemic differences in the fields in which these certificates are awarded, including type of school, median first-year earnings, and student outcomes.

As shown in Table 3, DTCs awarded more career certificates than Florida's colleges (75,103 vs. 47,162, respectively). However, students who completed certificates from FCS institutions were more successful at finding employment in the labor market. For example, 76 percent of completers of career certificates from FCS institutions found employment, compared with 68 percent of those from DTCs.⁸ In addition, the median first-year earnings were higher for completers from colleges (\$34,218) than that of those with certificates from DTCs (\$27,584). This gap may be attributable to the mixture of programs offered by DTCs compared with those offered by FCS institutions. For example, FCS institutions enroll a much higher percentage of students in career certificate programs, such as Law Enforcement Officer, that traditionally have higher placement rates and earnings compared with other career certificate programs.

7 Additionally, during the five-year study period, almost 1,700 students completed apprenticeships from FCS institutions, and more than 5,600 additional apprenticeships were completed by students in DTCs. Outcomes for different apprentice programs can be found at <http://www.beyondeducation.org/esm>.

8 Part of this gap may be a function of the coverage of the UI wage data. For example, many of the occupations for which career certificates are awarded can lead to self-employment, which may not be captured in the UI data.

Table 3: Employment Outcomes of Completers With Career Certificates Awarded by FCS Institutions and DTCs

Outcome	Career Certificate (FCS)	Career Certificate (DTCs)
Median First-Year Earnings	\$34,218	\$27,584
Total Completers (Graduates)	47,162	75,103
Total Employed	35,656	50,709
Total Percent Employed	76%	68%

Career Certificates Awarded by District Technical Centers

Table 4 presents selected student outcomes for the most popular career certificate programs offered by DTCs. Median first-year earnings ranged from less than \$21,000 (Cosmetology) to more than \$36,000 (Law Enforcement Officer). In addition to Cosmetology, other lower paying career certificates included Patient Care Technician, Nursing Assistant (Long-Term Care), Nursing Assistant (Articulated), Medical Assisting, Automotive Service Technology, Phlebotomy, and Child Care Center Operations.

Table 4: Employment Outcomes for Completers With Popular Career Certificates Awarded by District Technical Centers

Area of Study	Median First-Year Earnings	Number Employed	Percent Employed
Cosmetology	\$20,750	1,980	59%
Patient Care Technician	\$21,486	1,825	64%
Nursing Assistant (Long-Term Care)	\$21,672	2,112	67%
Nursing Assistant (Articulated)	\$21,852	1,805	65%
Medical Assisting	\$22,664	1,373	70%
Automotive Service Technology	\$23,108	1,522	59%
Phlebotomy	\$23,564	1,769	65%
Child Care Center Operations	\$25,060	1,731	66%
Florida Statewide Median, Career Certificates, DTCs	\$27,584	50,709	68%
Fire Fighter	\$30,454	3,741	77%
Commercial Vehicle Driving	\$32,816	1,296	62%
Practical Nursing	\$33,600	7,492	80%
Law Enforcement Officer	\$36,336	1,242	79%

Table 5 shows median first-year earnings and employment rates of completers of career certificates awarded by specific DTCs. Median first-year earnings varied across DTCs. At the low end, completers from four DTCs had median first-year earnings of less than \$21,000 (Sumter County Adult Education, South Dade Technical College, Fred K. Marchman Technical College, and Gadsden Technical Institute). At the high end, completers from two DTCs (Fort Myers Institute of Technology and George T. Baker Aviation Technical College) had median first-year earnings greater than \$35,500. Additionally, completers from five other DTCs (George Stone Area Vocational Technical Center, Orange Technical Education Center–Mid-Florida Tech, Lake Technical College, Bradford-Union Area Career Technical Center, and Miami Lakes Educational Center and Technical College) had median first-year earnings that also exceeded \$30,000.

Table 5: Employment Outcomes for Completers of Career Certificates, by District Technical Center

District Technical Center	Median First-Year Earnings	Number Employed	Percent Employed
Sumter County Adult Education	\$20,652	78	60%
South Dade Technical College	\$20,868	322	48%
Fred K. Marchman Technical College	\$20,928	236	60%
Gadsden Technical Institute	\$20,932	72	66%
Wakulla County Adult and Community Education	\$22,634	84	68%
Indian River–Technical Center for Career and Adult Education	\$23,014	799	61%
Brewster Technical College	\$23,428	633	63%
Orange Technical Education Center–Westside Tech	\$23,696	736	63%
The English Center	\$24,020	374	53%
D.A. Dorsey Technical College	\$24,088	83	57%
Ridge Technical Center	\$24,386	1,484	71%
Flagler Technical Institute	\$24,442	595	56%
Lively Technical Center	\$24,530	1,023	63%
Charlotte Technical Center	\$24,784	801	71%
Lindsey Hopkins Technical College	\$24,866	984	54%
Learey Technical College	\$25,108	1,457	67%
DeSoto County Adult Education Center	\$25,172	139	65%
Maynard A. Traviss Career Center	\$25,304	1,009	73%
Tom P. Haney Technical Center	\$25,420	724	71%
Aparicio-Levy Technical College	\$25,500	245	61%
Cape Coral Institute of Technology	\$25,624	638	68%
Orange Technical Education Center–Orlando Tech	\$26,054	1,146	71%
Radford M. Locklin Technical Center	\$26,320	201	58%
Orange Technical Education Center–Winter Park Tech	\$26,372	804	65%
Lorenzo Walker Institute of Technology	\$26,484	1,211	71%
Sheridan Technical College	\$26,648	2,931	61%
Atlantic Technical College	\$26,792	1,798	64%

District Technical Center	Median First-Year Earnings	Number Employed	Percent Employed
Suwannee-Hamilton Technical Center	\$26,802	282	66%
Robert Morgan Educational Center and Technical College	\$26,856	1,281	64%
Withlacoochee Technical College	\$27,400	967	68%
Manatee Technical College	\$27,544	2,056	70%
Pinellas Technical College–St. Petersburg Campus	\$27,544	1,938	69%
Florida Statewide Median, Career Certificates, DTCs	\$27,584	50,709	68%
Technical Education Center–Osceola	\$27,620	1,184	70%
Emerald Coast Technical College	\$27,700	213	73%
First Coast Technical College	\$27,752	2,001	74%
Immokalee Technical Center	\$27,862	311	63%
Okaloosa Applied Technology Center	\$28,156	351	65%
Erwin Technical College	\$28,368	1,886	71%
Marion County Community Technical and Adult Education Center	\$28,372	1,793	74%
Pinellas Technical College–Clearwater Campus	\$28,560	1,120	67%
William T. McFatter Technical College	\$28,566	2,472	67%
Taylor Technical Institute	\$28,762	316	60%
Florida Panhandle Technical College	\$29,238	935	65%
Suncoast Technical College	\$29,296	1,387	74%
Monroe County Adult and Community Education	\$29,468	27	51%
George Stone Area Vocational Technical Center	\$30,682	1,078	67%
Orange Technical Education Center–Mid-Florida Tech	\$31,026	2,442	72%
Lake Technical College	\$31,500	1,807	75%
Bradford-Union Area Career Technical Center	\$32,220	258	60%
Miami Lakes Educational Center and Technical College	\$32,840	1,595	65%
Fort Myers Institute of Technology	\$35,524	2,409	77%
George T. Baker Aviation Technical College	\$37,076	396	78%

As noted previously, the gap in earnings could be driven in part by the labor market served by the different DTCs. The mix of program offerings will also affect overall earnings outcomes. DTCs that focus on higher paying occupations and industries will have graduates with higher median first-year earnings than DTCs that graduate more students in lower earning occupations and professions.

Figure 11 shows the median first-year earnings of graduates with career certificates awarded by DTCs. Earnings outcomes varied considerably, ranging from \$20,652 (Sumter County Adult Education) to \$37,076 (George T. Baker Aviation Technical College).

Figure 12 shows the range of median first-year earnings of graduates from DTCs who completed a career certificate in Practical Nursing, compared with the overall median first-year earnings of completers among all career certificates awarded by that DTC. At all DTCs listed, the median first-year earnings of graduates with a career certificate in Practical Nursing exceeded the overall median first-year earnings among all completers from that DTC.

Figure 11: Median First-Year Earnings of Completers With Career Certificates, by District Technical Center

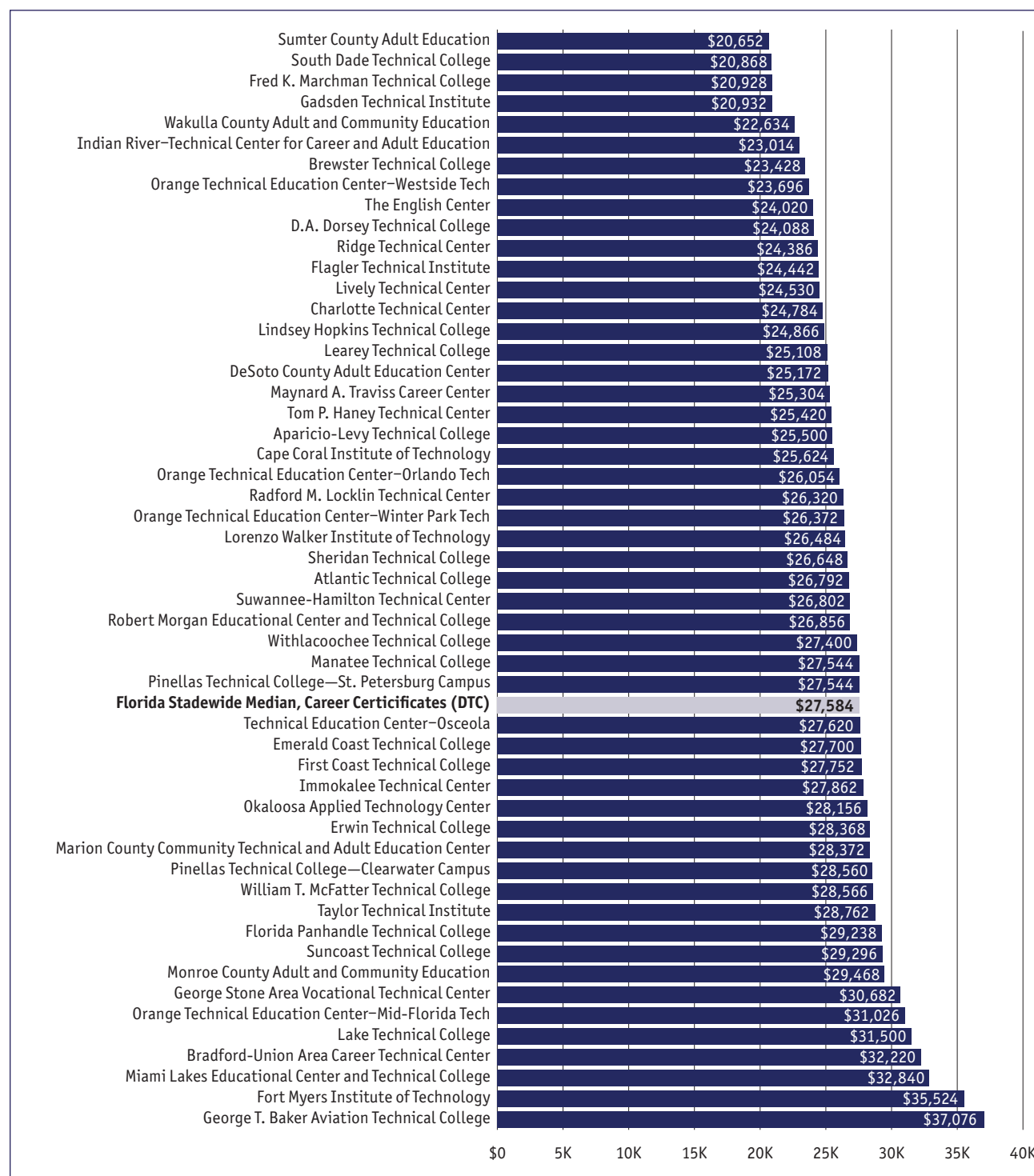
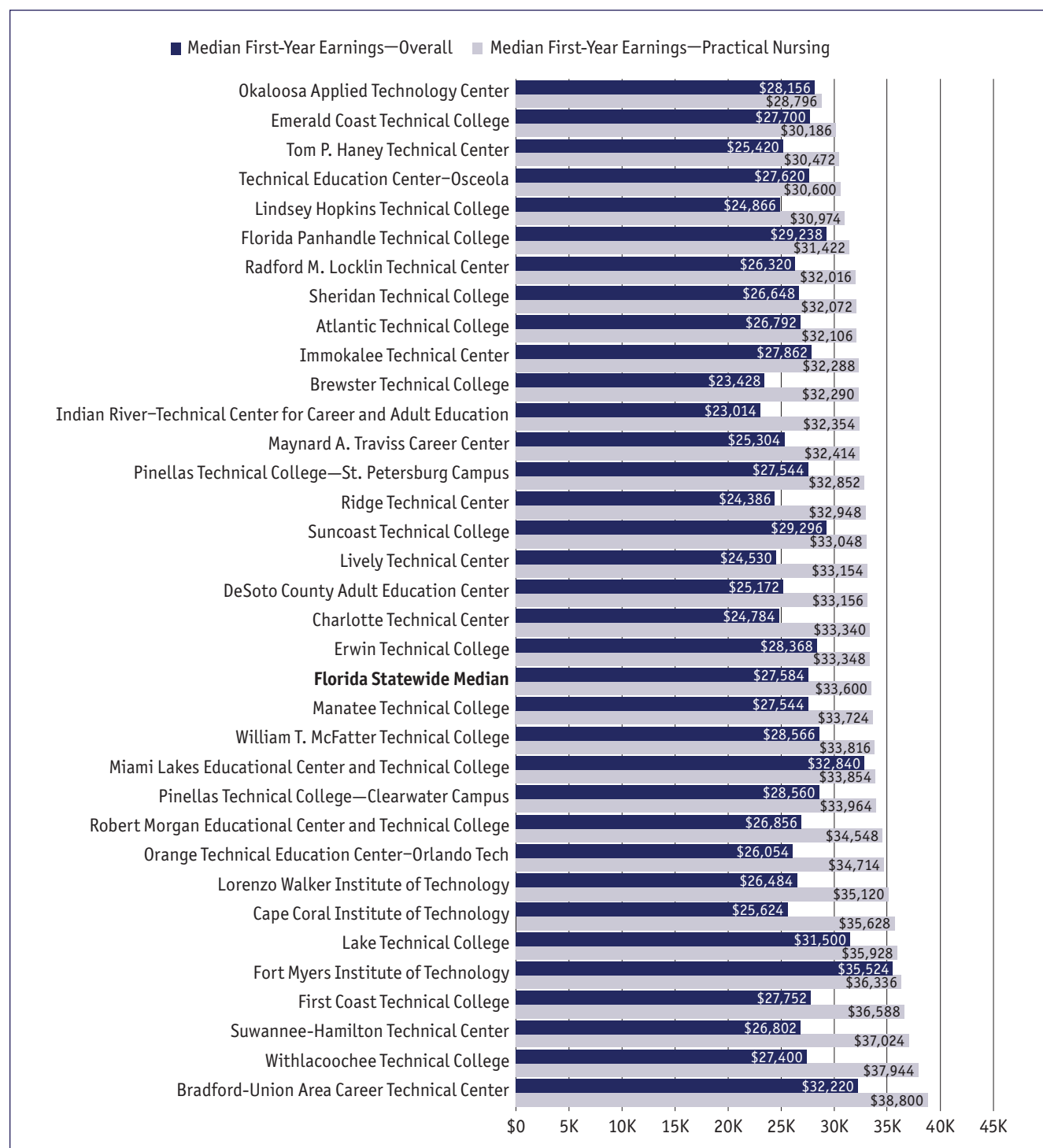


Figure 12: Median First-Year Earnings of Completers With Career Certificates Overall and Those With Career Certificates in Practical Nursing, by District Technical Center



Career Certificates Awarded by the Florida College System

Colleges in Florida also award career certificates, but not as many as awarded by DTCs. Colleges in Florida also produce career certificates in somewhat different areas than DTCs. As noted in Figure 13, the statewide median first-year earnings of completers with career certificates from FCS institutions were over \$34,000. The median first-year earnings of completers from 11 colleges were within \$2,000 of the state median. In short, a fairly tight clustering of median first-year earnings existed across many of the state's colleges. Only completers of career certificates from Daytona State College and Pensacola State College had median first-year earnings of less than \$30,000. At the other end of the distribution, completers from five colleges (Polk State College, Florida Keys Community College, Hillsborough Community College, Valencia College, and St. Petersburg College) had median first-year earnings of more than \$40,000. And median first-year earnings of completers from Broward College exceeded \$54,000. This overall convergence hides some great differences at the program level and again shows why detailed program-level analysis is essential.

Figure 13: Median First-Year Earnings of Completers With Career Certificates, by College

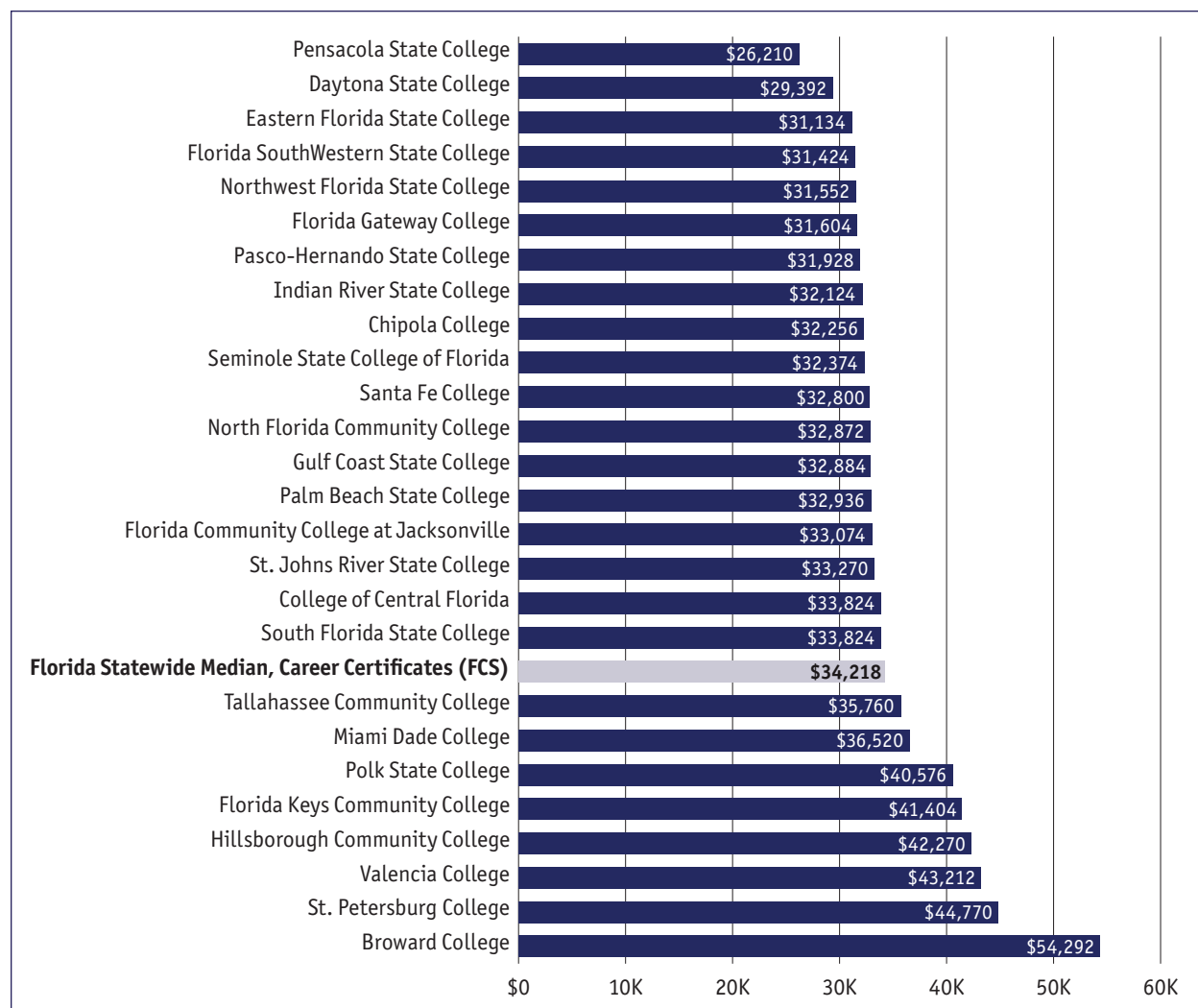
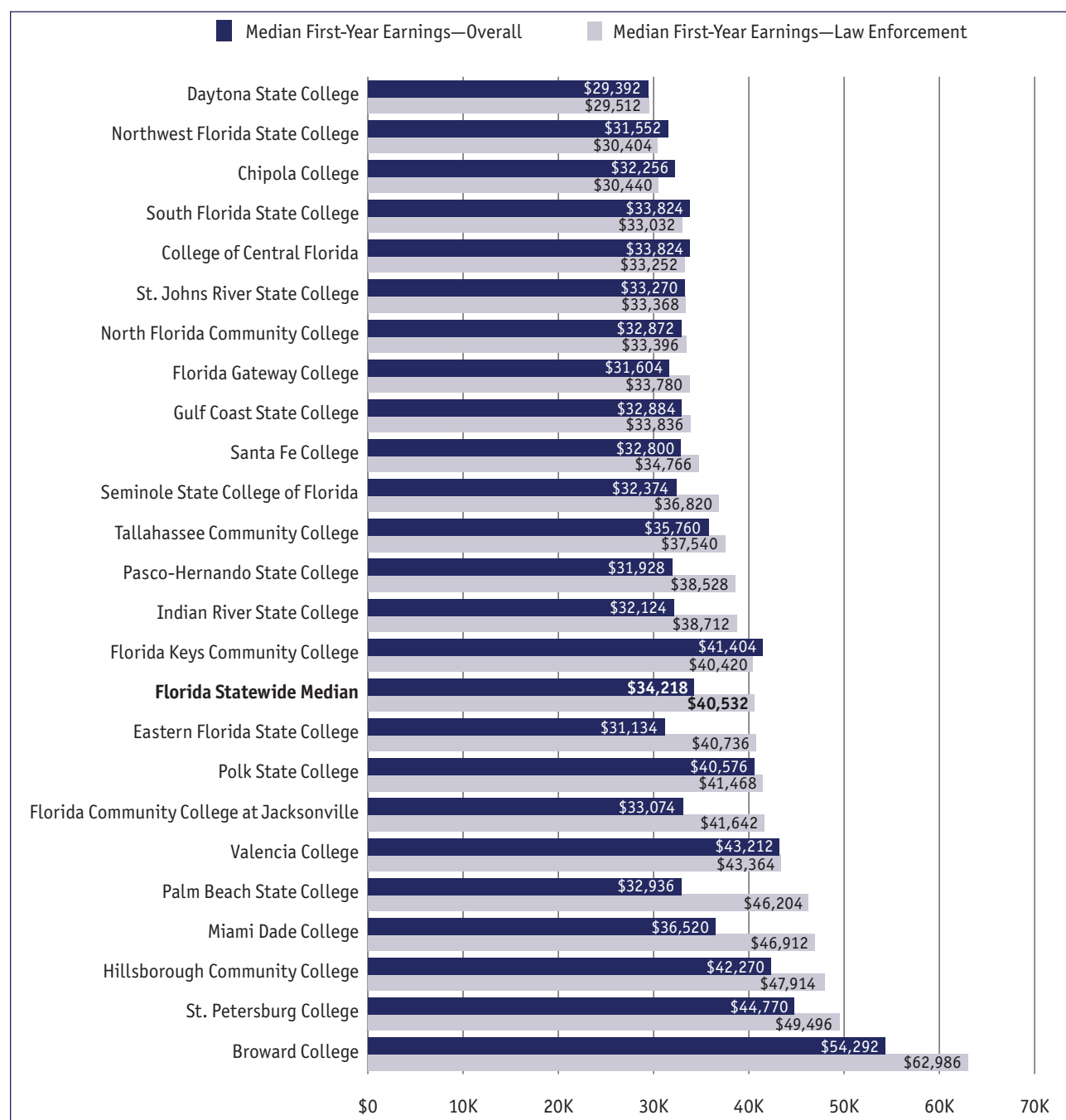


Figure 14 compares the median first-year earnings of graduates with a career certificate in Law Enforcement with the overall median first-year earnings of completers for all career certificate programs at that institution. Law Enforcement is the most popular career certificate awarded by FCS institutions.

Across the state, the median first-year earnings of graduates with career certificates in Law Enforcement (over \$40,000) exceeded the overall state median for all career certificates (around \$34,000). However, the gap varied widely across graduates from the same college. For example, at Palm Beach State College, the median first-year earnings of graduates in Law Enforcement exceeded (by almost \$13,300) the median first-year earnings of the overall median first-year earnings of students from all career certificate programs at the college. Elsewhere, this gap was around \$9,600 at Eastern Florida State College and nearly \$10,400 at Miami Dade College. However, at a few colleges (e.g., Northwest Florida State College, Chipola College, South Florida State College,

College of Central Florida, and Florida Keys Community College), the median first-year earnings of graduates in Law Enforcement were lower than the overall median first-year earnings of graduates of career certificate programs at those colleges.

Figure 14: Median First-Year Earnings of All Completers With Career Certificates Overall and Those With Career Certificates in Law Enforcement, by College



College Credit Certificates

College credit certificate programs are a series of college-credit courses (typically less than 60 credits) that prepare students for entry-level employment in specific career fields or for career advancement. The length of these programs varies, but they can generally be completed in one year or less. These programs are also part of A.S. or A.A.S. degree programs. Programs are available in a wide range of vocations, including such fields as accounting technology, computer graphics, and plumbing technology. Florida's colleges awarded more than 39,000 college credit certificates during the five-year study period.

With statewide median first-year earnings of more than \$31,500, completers with college credit certificates had, on average, higher median first-year earnings than graduates with A.A. degrees and those who completed career certificates from DTCs.

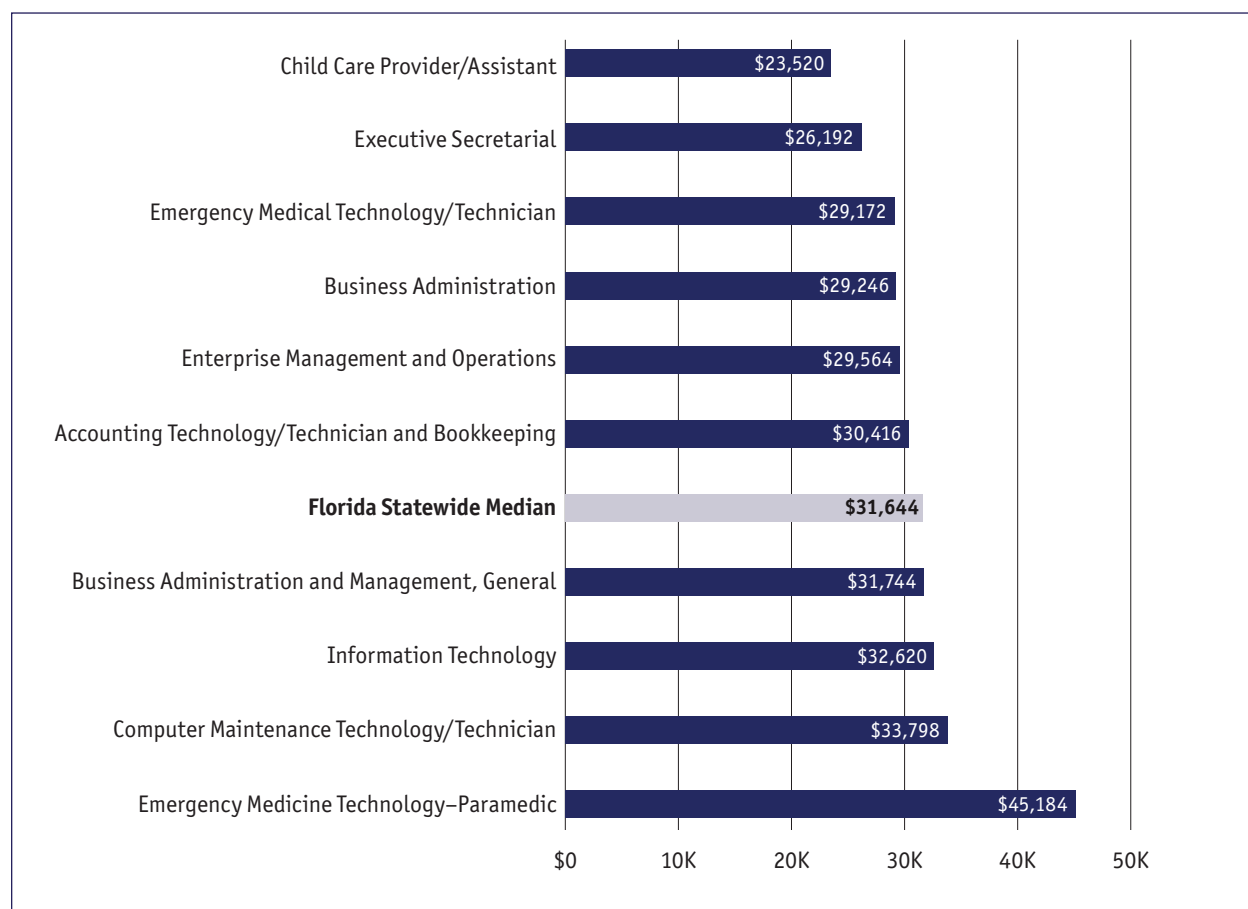
Table 6 shows that completers with college credit certificates from St. Johns River State College had the lowest median earnings, about \$27,400. In contrast, completers with college credit certificates from three colleges (North Florida Community College, South Florida State College, and Chipola College) had median first-year earnings that exceeded \$43,800. In comparison, the median first-year earnings of graduates with bachelor's degrees from a university were around \$33,700, which is lower than the median first-year earnings of completers with college credit certificates from 10 colleges.

Table 6: Employment Outcomes for Completers With College Credit Certificates, by College

College	Number of Completers	Median First-Year Earnings	Number Employed	Percent Employed
St. Johns River State College	258	\$27,406	167	65%
Gulf Coast State College	232	\$28,124	180	78%
Valencia College	8,642	\$28,864	6,327	73%
Polk State College	355	\$29,080	276	78%
Pensacola State College	649	\$29,528	421	65%
Florida Gateway College	229	\$29,608	156	68%
Eastern Florida State College	1,731	\$29,940	1,050	61%
Palm Beach State College	2,036	\$29,976	1,536	75%
Seminole State College of Florida	3,822	\$30,138	2,714	71%
Miami Dade College	4,279	\$30,452	3,137	73%
Daytona State College	1,610	\$30,702	1,091	68%
Northwest Florida State College	666	\$31,484	477	72%
Florida Statewide Median, College Credit Certificates, FCS	39,057	\$31,644	28,626	73%
Indian River State College	1,296	\$31,690	957	74%
State College of Florida, Manatee-Sarasota	39	\$32,702	25	64%
Hillsborough Community College	2,963	\$32,756	2,283	77%
Florida Community College at Jacksonville	2,462	\$32,806	1,803	73%
Florida SouthWestern State College	1,336	\$33,344	1,101	82%
Santa Fe College	977	\$33,548	684	70%
Tallahassee Community College	210	\$34,520	155	74%
Pasco-Hernando State College	455	\$35,944	335	74%
Broward College	1,918	\$36,696	1,527	80%
Florida Keys Community College	49	\$36,992	30	61%
College of Central Florida	835	\$37,780	646	77%
Lake-Sumter State College	142	\$41,822	115	81%
St. Petersburg College	1,597	\$41,828	1,188	74%
North Florida Community College	148	\$43,856	122	82%
South Florida State College	126	\$44,340	109	87%
Chipola College	84	\$47,598	74	88%

Figure 15 identifies the median first-year earnings of completers with college credit certificates from the most popular college credit certificate programs. Completers of college credit certificates in Child Care Provider/Assistant had the lowest median first-year earnings (\$23,520), followed by Executive Secretarial (just over \$26,000). At the high end of the scale, completers of college credit certificates in Emergency Medicine Technology–Paramedic had median first-year earnings around \$45,000, which is over \$11,000 more than the next highest area of study (Computer Maintenance Technology/Technician).

Figure 15: Median First-Year Earnings of Completers With College Credit Certificates in the Most Popular College Credit Certificate Programs in Florida



Levels of Public Assistance

Higher education is often viewed as one of the most productive forms of human capital investment that individuals and taxpayers make. Up to this point, this report has focused primarily on earnings that are associated with the completion of the most common degrees and certificates awarded in Florida. This section examines public assistance⁹—another indicator of the financial well-being of students who complete different programs.

⁹ For purposes of this report, public assistance includes a unique count of graduates and completers who received support or services from the Temporary Assistance for Needy Families program and/or the Supplemental Nutrition Assistance Program.

Table 7 reports the percentage of completers found in the wage database to have received public assistance. Of note, the levels reported are not adjusted for differences in the skill level or income level of students who enrolled in these different programs—that is, these outcome measures are “unadjusted” for such factors known to affect student success. Keeping this in mind, Table 7 shows that about 22 percent of completers of career certificates from DTCs received public assistance, which is higher than the percentage of graduates and completers who received public assistance but earned their degrees and certificates from FCS institutions.

Table 7: Level of Public Assistance, by Credential

Credential	Number of Completers	Number Who Received Public Assistance	Percent Public Assistance
Associate of Arts Degree (FCS)	257,360	18,983	7%
Applied Technology Diploma (FCS)	8,515	688	8%
Apprenticeship (FCS)	1,699	137	8%
Associate of Applied Science Degree (FCS)	10,721	937	9%
College Credit Certificate (FCS)	39,057	4,047	10%
Career Certificate (FCS)	47,162	5,716	12%
Applied Technology Diploma (DTC)	4,155	498	12%
Apprenticeship (DTC)	5,638	716	13%
Career Certificate (DTC)	75,103	16,326	22%

Completers With Career Certificates Who Received Public Assistance

Table 8 shows the percentage of completers of career certificates who received public assistance by DTC. More than 30 percent of graduates and completers from 11 DTCs received public assistance: Lively Technical Center, Lindsey Hopkins Technical College, Wakulla County Adult and Community Education, D.A. Dorsey Technical College, DeSoto County Adult Education Center, Immokalee Technical Center, Suwannee-Hamilton Technical Center, Brewster Technical College, Sumter County Adult Education, South Dade Technical College, and Gadsden Technical Institute. Of these, over 40 percent of completers from four (Gadsden Technical Institute, South Dade Technical College, Sumter County Adult Education, and Brewster Technical College) received public assistance.

Table 8: Completers With Career Certificates Who Received Public Assistance, by District Technical Center

District Technical Center	Number of Completers	Number Who Received Public Assistance	Percent Public Assistance
George T. Baker Aviation Technical College	511	44	9%
Suncoast Technical College	1,877	225	12%
William T. McFatter Technical College	3,703	490	13%
Orange Technical Education Center—Mid-Florida Tech	3,411	462	14%
Fort Myers Institute of Technology	3,128	514	16%
Okaloosa Applied Technology Center	543	88	16%
Lorenzo Walker Institute of Technology	1,703	296	17%
Technical Education Center—Osceola	1,690	289	17%
Atlantic Technical College	2,809	468	17%
Lake Technical College	2,419	400	17%
Orange Technical Education Center—Orlando Tech	1,609	293	18%
Pinellas Technical College—Clearwater Campus	1,663	297	18%
Orange Technical Education Center—Winter Park Tech	1,228	216	18%
Sheridan Technical College	4,810	979	20%
Tom P. Haney Technical Center	1,024	208	20%
Robert Morgan Educational Center and Technical College	1,990	399	20%
Marion County Community Technical and Adult Education Center	2,427	518	21%
Charlotte Technical Center	1,124	235	21%
First Coast Technical College	2,718	564	21%
Manatee Technical College	2,931	605	21%
Emerald Coast Technical College	291	60	21%
Flagler Technical Institute	1,064	238	22%
Cape Coral Institute of Technology	934	206	22%
Radford M. Locklin Technical Center	345	76	22%
Orange Technical Education Center—Westside Tech	1,169	274	23%
Pinellas Technical College—St. Petersburg Campus	2,790	639	23%
Miami Lakes Educational Center and Technical College	2,448	556	23%
Withlacoochee Technical College	1,427	343	24%
Ridge Technical Center	2,097	496	24%
George Stone Area Vocational Technical Center	1,621	400	25%
Brewster Technical College	2,675	657	25%
Maynard A. Traviss Career Center	1,382	362	26%
Aparicio-Levy Technical College	399	104	26%
Bradford-Union Area Career Technical Center	430	112	26%
Indian River—Technical Center for Career and Adult Education	1,301	349	27%

District Technical Center	Number of Completers	Number Who Received Public Assistance	Percent Public Assistance
Florida Panhandle Technical College	1,439	384	27%
Fred K. Marchman Technical College	396	112	28%
The English Center	706	197	28%
Learey Technical College	2,184	602	28%
Taylor Technical Institute	523	154	29%
Lively Technical Center	1,636	510	31%
Wakulla County Adult and Community Education	124	43	35%
Lindsey Hopkins Technical College	1,811	625	35%
Immokalee Technical Center	490	178	36%
DeSoto County Adult Education Center	213	77	36%
D.A. Dorsey Technical College	145	52	36%
Suwannee-Hamilton Technical Center	429	168	39%
Sumter County Adult Education	129	55	43%
Brewster Technical College	1,007	428	43%
South Dade Technical College	677	318	47%
Gadsden Technical Institute	109	53	49%
Monroe County Adult and Community Education	53	—*	—*

*Fewer than 10 students received public assistance.

The percentage of graduates and completers of career certificates who received public assistance varied widely across Florida's colleges (Table 9). Twenty-three percent of completers from North Florida Community College received public assistance. Additionally, 10 percent or more of completers from 17 other colleges received public assistance. In contrast, fewer than 5 percent of completers from two colleges (St. Petersburg College and Valencia College) received public assistance.

Table 9: Completers With Career Certificates Who Received Public Assistance, by College

College	Number of Completers	Number Who Received Public Assistance	Percent Public Assistance
St. Petersburg College	732	23	3%
Valencia College	1,140	45	4%
Polk State College	531	27	5%
Broward College	1,204	60	5%
Tallahassee Community College	1,699	105	6%
Northwest Florida State College	653	59	9%
Miami Dade College	3,927	409	10%
Gulf Coast State College	894	93	10%
Palm Beach State College	4,892	507	10%
Santa Fe College	1,261	128	10%
Hillsborough Community College	2,424	241	10%
St. Johns River State College	861	91	11%
Eastern Florida State College	2,762	330	12%
Seminole State College of Florida	2,020	234	12%
Florida Community College at Jacksonville	6,689	895	13%
Chipola College	729	94	13%
Indian River State College	3,470	482	14%
Pasco-Hernando State College	1,963	293	15%
College of Central Florida	1,556	254	16%
South Florida State College	1,266	206	16%
Daytona State College	3,438	545	16%
Pensacola State College	1,508	293	19%
Florida Gateway College	852	186	22%
North Florida Community College	513	117	23%
Florida SouthWestern State College	136	—*	—*
Florida Keys Community College	192	—*	—*

*Fewer than 10 students received public assistance.

Completers With College Credit Certificates Who Received Public Assistance

The percentage of graduates and completers of college credit certificates who received public assistance varied considerably. As shown in Table 10, more than 10 percent of graduates and completers from 13 colleges received public assistance: Eastern Florida State College, College of Central Florida, South Florida State College, Miami Dade College, Seminole State College of Florida, Pasco-Hernando State College, Gulf Coast State College, Florida Gateway College, Pensacola State College, Polk State College, Indian River State College, Daytona State College, and St. Johns River State College.

Table 10: Graduates and Completers With College Credit Certificates Who Received Public Assistance, by College

College	Number of Completers	Number Who Received Public Assistance	Percent Public Assistance
St. Petersburg College	1,597	103	6%
Broward College	1,918	106	6%
Lake-Sumter State College	142	12	8%
Santa Fe College	977	76	8%
Florida SouthWestern State College	1,336	101	8%
Northwest Florida State College	666	61	9%
Palm Beach State College	2,036	181	9%
Hillsborough Community College	2,963	261	9%
Valencia College	8,642	882	10%
Tallahassee Community College	210	21	10%
Florida Community College at Jacksonville	2,462	239	10%
Miami Dade College	4,279	485	11%
South Florida State College	126	14	11%
College of Central Florida	835	88	11%
Eastern Florida State College	1,731	182	11%
Pasco-Hernando State College	455	56	12%
Seminole State College of Florida	3,822	450	12%
Gulf Coast State College	232	29	13%
Polk State College	355	50	14%
Pensacola State College	649	89	14%
Florida Gateway College	229	31	14%
Indian River State College	1,296	191	15%
Daytona State College	1,610	263	16%
St. Johns River State College	258	53	21%
Chipola College	84	—*	—*
Florida Keys Community College	49	—*	—*
State College of Florida, Manatee-Sarasota	39	—*	—*
North Florida Community College	148	—*	—*

*Fewer than 10 students received public assistance.

Degrees and First-Year Earnings Among Graduates From Florida's Universities

Figure 16 displays median first-year earnings of graduates with academic degrees (bachelor's, master's, specialist, and doctorate), and Figure 17 shows median first-year earnings of graduates with professional degrees¹⁰ awarded by Florida's universities. The three most common professional degrees are awarded in the fields of law, medicine, and pharmacy.

Figure 16 shows that earnings increase with every level of academic degree. For example, about \$15,000 separated the median first-year earnings of graduates with doctorate degrees from those with master's degrees, and around \$15,000 separated the median first-year earnings of graduates with master's degrees from those with bachelor's degrees.

In addition to these well-known academic degrees, Florida offers several specialist degree programs that are designed for individuals who want to develop advanced knowledge and skills beyond the master's degree but who do not want to pursue a doctorate. Median first-year earnings of graduates with specialist degrees fell closer to the earnings of those with master's graduates than they did to the earnings of graduates with doctorate degrees. More information about the earnings associated with these degrees is presented later in this report.

Figure 17 shows the median first-year earnings of graduates with professional degrees. Law school graduates, after passing the bar exam, are fully licensed to practice law. At slightly more than \$45,000, median first-year earnings of these graduates are about \$3,500 less than the median first-year earnings of all graduates with master's degrees in the state. The median first-year earnings of graduates with medical degrees are higher, about \$49,000. However, medical school graduates are not fully licensed as physicians until they complete their internship requirements. Because of these factors, graduates of other professional programs tend to earn far more than medical school graduates during their early years of employment.

¹⁰ These are postbaccalaureate programs of study that are designed to provide the training necessary for completers to enter into a profession.

Figure 16: Median First-Year Earnings of Graduates With Academic Degrees From Universities, by Degree

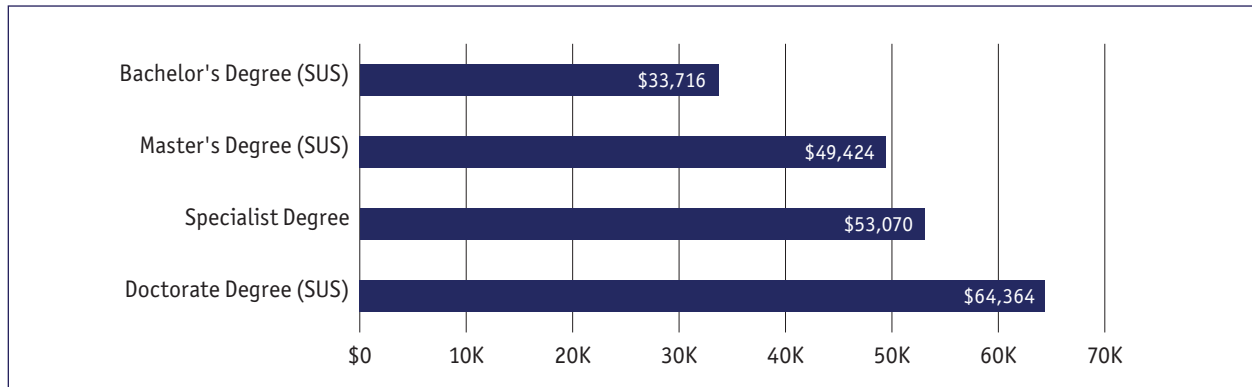
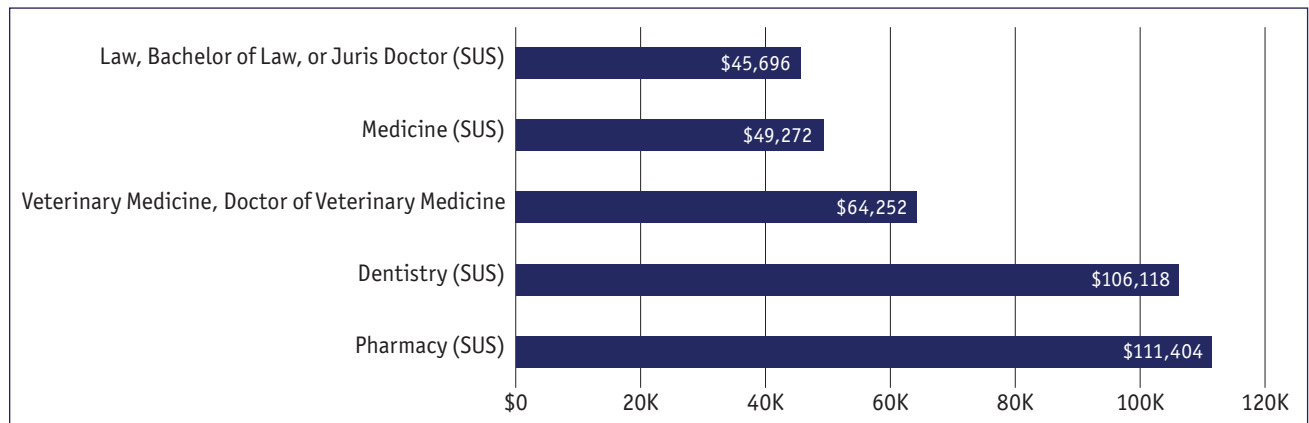


Figure 17: Median First-Year Earnings of Graduates With Professional Degrees From Universities, by Degree



First-Year Earnings of Graduates With Bachelor's Degrees

The bachelor's degree is the most common degree awarded in the United States. Historically, a bachelor's degree has been a good investment. According to data from the U.S. Department of Labor, Bureau of Labor Statistics, graduates with bachelor's degrees nationwide earn on average about 65 percent per year more than high school graduates, and graduates with bachelor's degrees are far less likely to be unemployed.¹¹

However, these national data mask differences in the labor market outcomes of graduates with bachelor's degrees. As is evident in the figures in this section, the return on investment among graduates from universities varies widely by institution and by major. In short, graduates do not earn just a bachelor's degree; they earn a degree from a specific college or university and in a specific program. These choices have consequences for graduates when they enter the labor market. The data in this report and on the College Measures website enable readers to delve deeper into this variation.

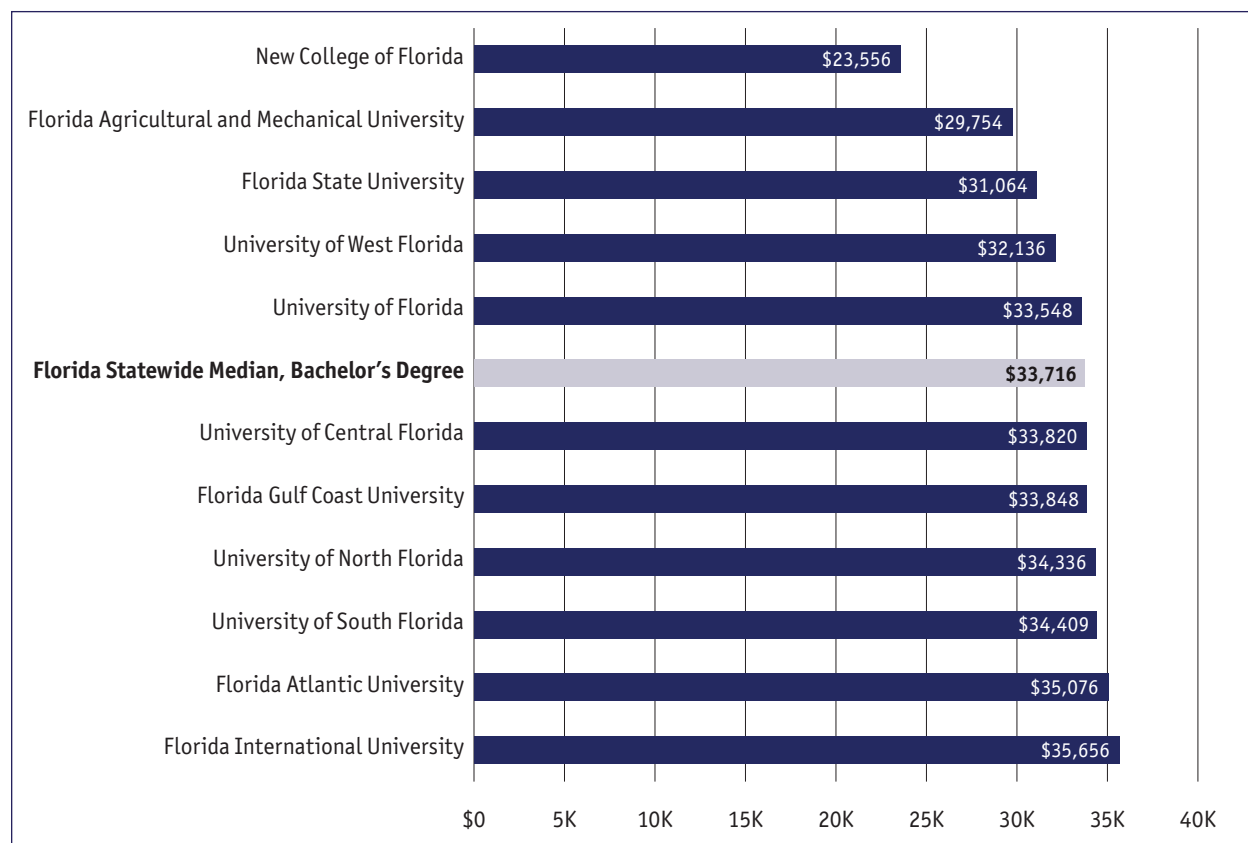
Variation by University

Figure 18 shows the median first-year earnings of graduates with bachelor's degrees by university.¹² Median first-year earnings of bachelor's degree graduates varied substantially, ranging from about \$23,500 (New College of Florida) to more than \$35,000 (Florida Atlantic University and Florida International University). Of note, universities serve different economic areas of the state, and both Florida Atlantic and Florida International Universities are located in one of the highest earnings areas in Florida.

¹¹ http://www.bls.gov/emp/ep_chart_001.htm

¹² Data for Florida Polytechnic University are not included in this report because the university was established by law in 2012. Data for New College of Florida are not included in several tables in this report because it does not use the same classification of instructional programs as other public universities in the state that allow their data to be reported at the program level.

Figure 18: Median First-Year Earnings of Graduates With Bachelor's Degrees, by University



After New College of Florida, the next four universities with graduates having the lowest median first-year earnings included the state's two flagship institutions: Florida State University and University of Florida. One possible reason for the lower median first-year earnings of graduates of these universities is that more of their graduates are likely pursuing further studies and/or are employed in states where WRIS2 employment and earnings data are not available. Statewide, 65 percent of graduates with bachelor's degrees were matched with wage data.¹³ The match rate, however, was only 59 percent for graduates of Florida State University and even lower, 50 percent, for graduates of University of Florida. Moreover, more than 10,400 graduates of University of Florida and more than 6,900 graduates of Florida State University had been identified as pursuing further studies. These data suggest that the flagship universities in the state's system of higher education play a broader

¹³ This report uses wage data from WRIS2. Currently, 39 states, plus Washington, DC, and Puerto Rico, participate in WRIS2. A map of participating states can be found at http://www.doleta.gov/performance/pfdocs/WRIS2_Map_Aug_2015.pdf. Florida's neighboring states, Georgia and Alabama, are not currently members of WRIS2. Additionally, some students are not seeking employment as they are enrolled in continuing education programs.

role than regional campuses, sending more of their graduates to professional- and graduate-level education than regional campuses whose graduates are more likely to enter the state's labor market directly after graduation.

Of note, the median first-year earnings of graduates from four schools (University of Central Florida, Florida Gulf Coast University, University of North Florida, and University of South Florida) were within \$750 of each other, suggesting that there are many university pathways into the labor market that are roughly valued at the same level by employers.

Variation by Fields of Study

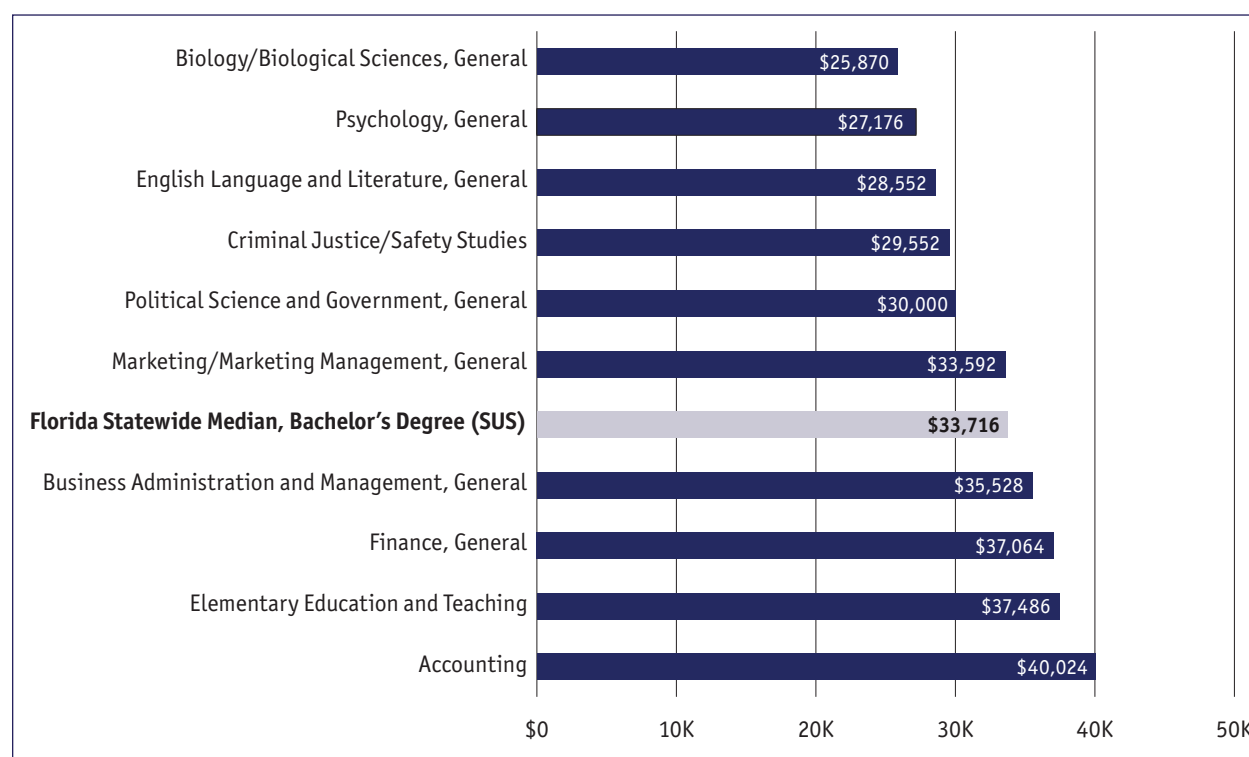
Figure 19 displays the median first-year earnings of graduates from the most popular fields of study in Florida. The median first-year earnings varied considerably between the lowest and highest paid fields. Graduates with degrees in Biology had the lowest first-year earnings, around \$7,800 less than the statewide median.¹⁴ Graduates with degrees in Psychology and English Language and Literature also fell at the bottom of the earnings distribution, followed by Criminal Justice/Safety Studies.

Graduates who majored in business-related fields (Business Administration and Management, Finance, and Accounting) were among the highest first-year earners. Accounting graduates were the highest paid among these popular programs. However, graduates with degrees in Marketing/Marketing Management, another business-related field, had first-year earnings below the statewide median.

Graduates with degrees in Elementary Education and Teaching had average first-year earnings that were nearly \$3,800 higher than the statewide median, which places them among the highest paid graduates in the state.

¹⁴ Graduates with degrees in Biology had low median first-year earnings, but they often experienced high rates of growth in earnings. Several years after graduation, the average earnings of graduates with degrees in Biology are often higher than the earnings of graduates in other fields who may have earned more immediately after graduation.

Figure 19: Median First-Year Earnings of Graduates From Popular Bachelor's Degree Programs, by Program



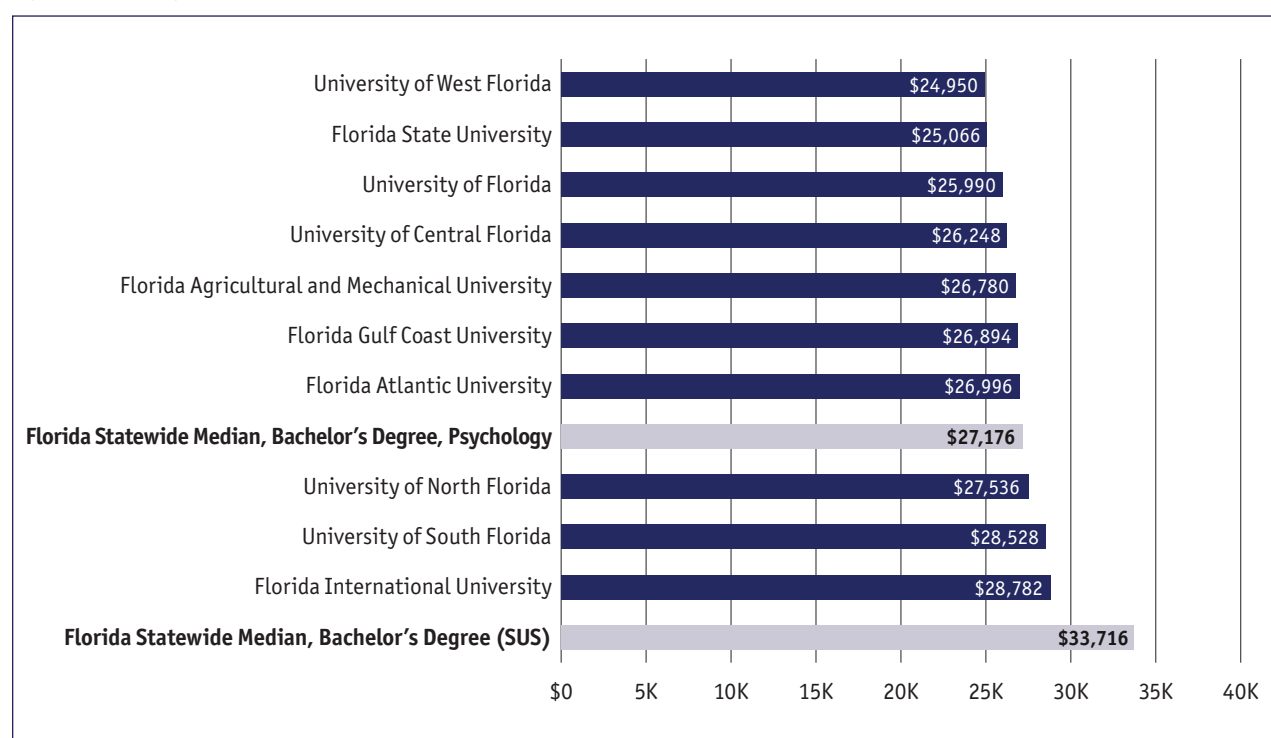
Variation Across Fields of Study in Different Universities

The median first-year earnings in the same field varied substantially across universities. Figures 20–22 show the earnings of graduates from two of the most popular undergraduate programs in the state, Psychology and Business, plus data on the earnings of graduates in two important STEM (Science, Technology, Engineering and Mathematics) fields: Biology and Mathematics.

These figures display the median first-year earnings for each area of study and the statewide median first-year earnings for all bachelor's degrees. This allows a comparison of the relative performance of each area of study and offers a sense of how well graduates from that area of study fare in the labor market relative to all graduates with bachelor's degrees from state universities. Again, differences in the size and strength of regional economies across the state affect some of the patterns.

Psychology is the most popular major on many campuses. The median first-year earnings of graduates with bachelor's degrees in Psychology were lower than the statewide median for all recipients of bachelor's degrees (Figure 20). Around \$4,000 separated the lowest median first-year earnings of graduates with bachelor's degrees in Psychology (University of West Florida) from graduates with the highest median first-year earnings (Florida International University).¹⁵

Figure 20: Median First-Year Earnings of Graduates with Bachelor's Degrees in Psychology, by University

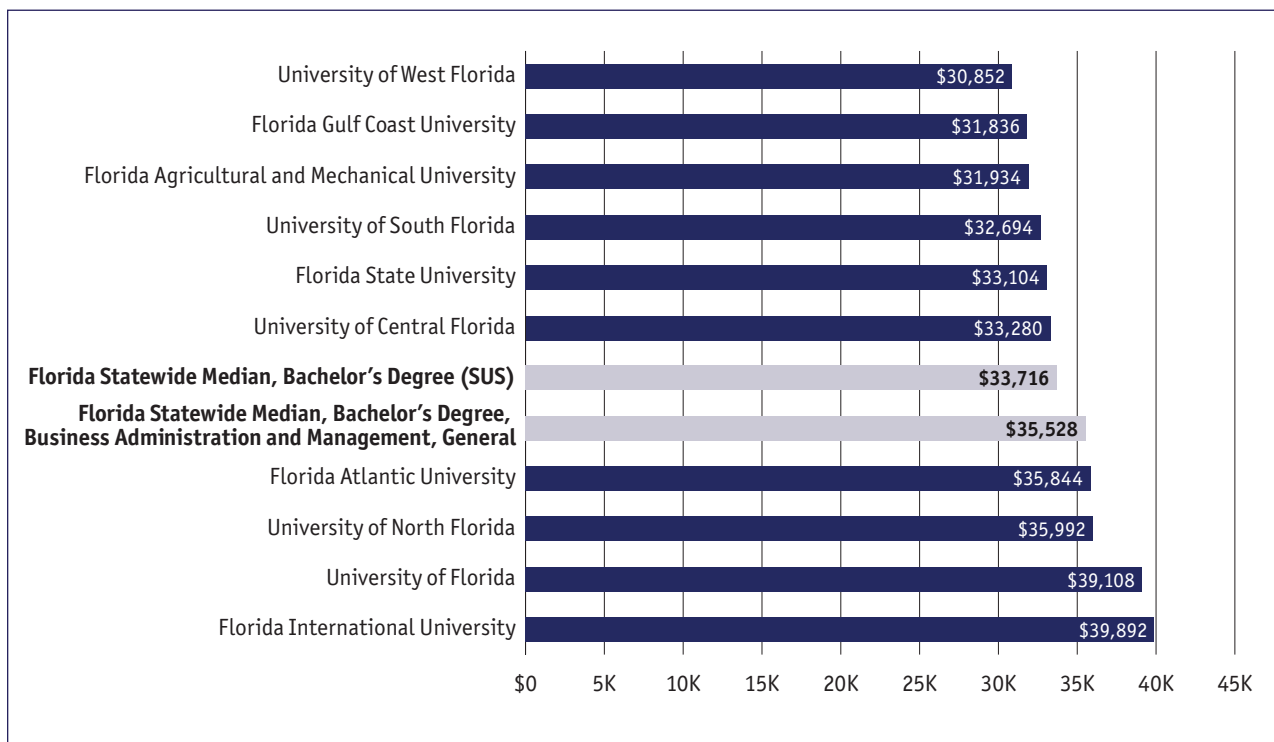


Graduates with degrees in Business Administration and Management tended to earn more than the relatively low first-year earnings of graduates with degrees in Psychology. In fact, the median first-year earnings of graduates of business-related programs statewide were higher (by approximately \$1,500) than the statewide median for all bachelor's degrees (Figure 21). That said, median first-year earnings of graduates with the same degree varied by university, as around

¹⁵ When considering the wage data from the state's flagship universities, remember that many more of their graduates are likely pursuing additional advanced training or have sought work out of state in an area not covered by WRIS2. For example, the match rate of graduates with bachelor's degrees in Psychology from Florida State University was 55 percent, which was lower than the match rate of other programs. The match rate for University of Florida was even lower (45 percent). The statewide match rate for graduates with bachelor's degrees in Psychology was 63 percent.

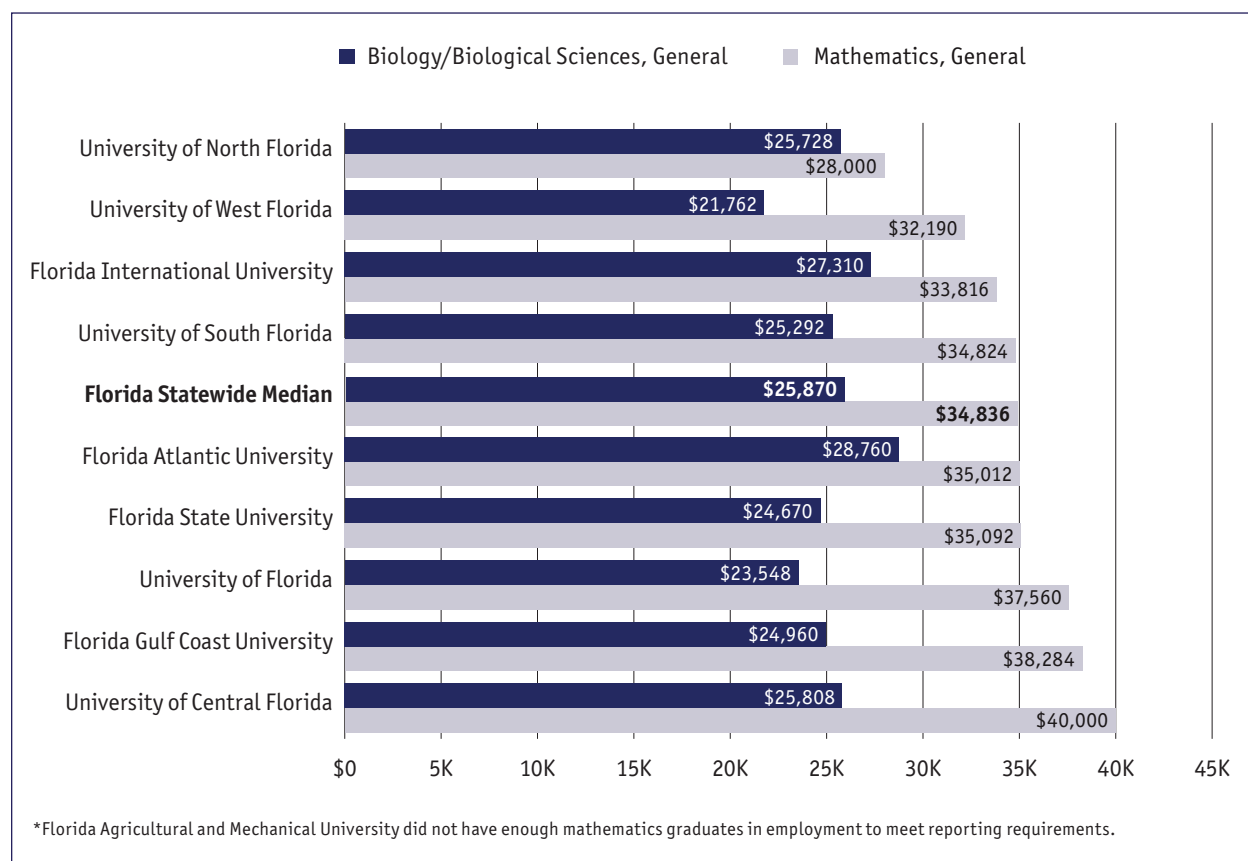
\$9,000 separated the median first-year earnings of graduates from University of West Florida with those from Florida International University. The earnings range among graduates with bachelor's degrees in Business was far greater than that of graduates with degrees in Psychology.

Figure 21: Median First-Year Earnings of Graduates With Bachelor's Degrees in Business Administration and Management, by University



Like most states, Florida is interested in increasing the number of graduates with degrees in the STEM fields. However, as is evident in Figure 22, the median first-year earnings of graduates with bachelor's degrees in Mathematics outpaced those of graduates with bachelor's degrees in Biology.

Figure 22: Median First-Year Earnings of Graduates With Bachelor's Degrees in Biology or Mathematics, by University*



Of note, graduates with degrees in Biology/Biological Sciences, General from Florida Atlantic University—the most successful Biology program based on earnings in the labor market—had median first-year earnings (about \$28,500) that were still lower than the statewide median for all graduates with bachelor's degrees (about \$33,500). By comparison, the median first-year earnings of Florida Atlantic University graduates with degree in Mathematics, General (about \$35,000) were slightly higher than the statewide median first-year earnings of all graduates with bachelor's degrees (about \$33,500).

Note that the median first-year earnings of graduates with degrees in Biology were lower than those of graduates with degrees in Mathematics from the same university. In the case of University of North Florida, the difference is small, but the difference in earnings between the two majors is more than \$10,000 for graduates from several other universities. Based on median first-year earnings, the labor market clearly rewards recent graduates with degrees in Mathematics more so than most graduates with other degrees, including Biology.

Remember, these patterns reflect earnings of graduates in their first year after graduation. Patterns may change over time. Data for longer term outcomes are available at the Economic Success Metrics website: <http://www.beyondeducation.org>.

Enrollment Patterns in Continuing Education of Students With Bachelor's Degrees

As is the case nationwide, the bachelor's degree is the highest degree that most students in Florida's universities will attain. Statewide, about 19 percent of graduates with bachelor's degrees continue their education in Florida one year after graduation.¹⁶ Table 11 shows the percentage of graduates with bachelor's degrees from each of Florida's universities that meet this criterion. The rate of continuing enrollment was within two percentage points of the state median for eight of the 11 universities. Only three universities fell outside this tight cluster. At the high end, about 25 percent of graduates with bachelor's degrees from University of Florida were enrolled in continuing education. In contrast, graduates with bachelor's degrees from New College of Florida were 10 percentage points *below* the state median—only 9 percent of its graduates were enrolled in continuing education in the state. Similarly, only 15 percent of graduates from University of North Florida were enrolled in continuing education.

¹⁶ This can be full time or part time. Data only show whether students were enrolled, not whether they completed an advanced degree or certificate. These enrollment data are for students enrolled within the State of Florida and does not include students who may be studying in other states.

Table 11: Percentage of Students With Bachelor’s Degrees Who Were Enrolled in Continuing Education, by University

Institution	Percent Continuing Education
New College of Florida	9%
University of North Florida	15%
Florida Atlantic University	17%
University of Central Florida	17%
University of West Florida	18%
University of South Florida	18%
Florida Gulf Coast University	18%
Florida State University	19%
Florida Statewide Median, Bachelor’s Degree (SUS)	19%
Florida International University	20%
Florida Agricultural and Mechanical University	21%
University of Florida	25%

Table 12 shows the percentage of students continuing their education among the most popular fields of study.¹⁷ Despite the tight clustering of universities around enrollment in continuing education, there is substantial variation across fields. For example, among all of the fields listed in Table 12, graduates with bachelor’s degrees in Business Administration and Finance were less likely to be enrolled in continuing education in the state. But note that graduates with bachelor’s degrees in Accounting, another popular business-related program, had high rates of enrollment in continuing education: Almost one-third of graduates with degrees in Accounting were enrolled in continuing education. Graduates with bachelor’s degrees in Social Work were also more likely than graduates from most other programs to be continuing their education. And 41 percent of graduates with a bachelor’s degree in Health Services/Allied Health/Health Sciences were doing so—the highest percentage from these popular fields of study.

¹⁷ Each program had more than 1,000 students in continuing education.

Table 12: Percentage of Students With Bachelor’s Degrees Who Were Enrolled in Continuing Education, by Popular Area of Study

Program	Percent Continuing Education
Business Administration and Management, General	11%
Finance, General	14%
Elementary Education and Teaching	14%
English Language and Literature, General	17%
Political Science and Government, General	19%
Criminal Justice/Safety Studies	22%
History, General	22%
Psychology, General	24%
Biology/Biological Sciences, General	29%
Accounting	31%
Social Work	39%
Health Services/Allied Health/Health Sciences, General	41%

Debt Levels Among Students in Florida’s Universities

Student debt is a growing concern nationwide. Totalling more than \$1 trillion, student debt now surpasses outstanding credit card debt and automobile loans and is second only to home mortgages.¹⁸ Many students are defaulting on their loans, and because student loans cannot be discharged in bankruptcy, the consequences of accumulating debt that cannot be paid off can be long term and financially devastating.

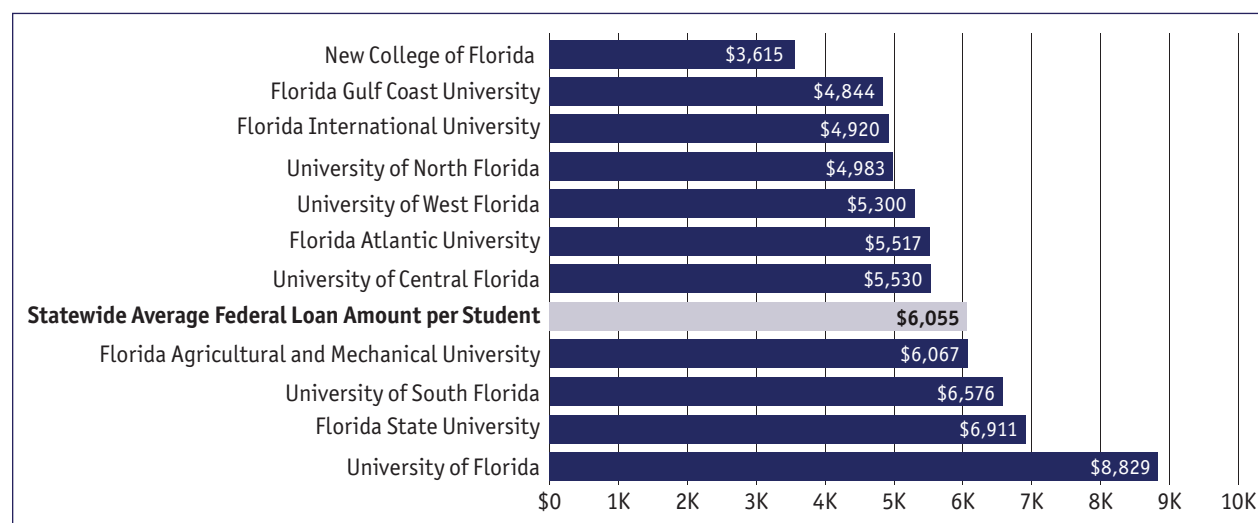
Similar to the debt levels reported previously for Florida’s colleges, data on debt are reported by each public university. The data reflect the average federal student loan debt of all students (not just graduates) attending universities during 2012–13. Data also include federal student loans from Stafford, Perkins, Graduate PLUS, Parent PLUS, and TEACH programs. The average student loan debt represents the total amount of student loans for 2012–13 at each university, divided by the number of students attending the university that academic year. The average does not include private loans or other debt issued by nonfederal government sources that students may have sought to help finance their education.

¹⁸ The Federal Reserve Bank of New York issues periodic reports on the level of student debt. See for example, http://www.newyorkfed.org/research/staff_reports/sr668.pdf or <http://www.newyorkfed.org/newsevents/news/research/2015/rp150217.html>.

As shown in Figure 23, the average statewide federal loan amount per student was slightly more than \$6,000. However, the range varied among universities, from around \$3,600 (New College of Florida) to more than \$8,800 (University of Florida). Because this disbursement amount includes both graduate and undergraduate students, there may be some upward bias on the amount reported in research universities, such as Florida State University and University of Florida.

These data are from 2012–13 and may reflect the economic pressures that students were under given the difficult economic conditions of the nation and the state at that time.

Figure 23: Average Federal Loan Amount per Student, by University, 2012–13



Bachelor's Degrees Earned at Florida State Colleges

In many states, including Florida, two-year colleges have been awarding bachelor's degrees. The authority to award bachelor's degrees is usually limited to more technical areas that are aligned with the career orientation of certificates and associate's degrees that are core to the mission of two-year colleges.

During the five-year study period, colleges in the State of Florida awarded almost 15,000 bachelor's degrees. These degrees were concentrated in a small number of areas of study (Table 13).

Table 13: Bachelor's Degrees Awarded by Colleges in Florida, by Area of Study

Area of Study	Number of Bachelor's Degrees	Percent of Bachelor's Degrees
Communications Technologies/Technicians and Support Services	41	0.3%
Biological and Biomedical Sciences	46	0.3%
Natural Resources and Conservation	66	0.5%
Engineering Technologies and Engineering-Related Fields	84	0.6%
Visual and Performing Arts	85	0.6%
Public Administration and Social Service Professions	86	0.6%
Legal Professions and Studies	144	1.0%
Computer and Information Sciences and Support Services	663	4.7%
Homeland Security, Law Enforcement, Firefighting, and Related Protective Services	1,114	7.8%
Education	2,915	20.5%
Health Professions and Related Programs	3,375	23.7%
Business, Management, Marketing, and Related Support Services	5,611	39.4%
Total	14,230	100.0%

Table 14 shows the median first-year earnings of graduates with bachelor's degrees awarded by Florida's colleges by area of study. The areas of study listed in Table 14 are relatively high paying. Not surprising then, the median first-year earnings of graduates with bachelor's degrees from Florida's colleges (about \$41,000) were higher than those of graduates with bachelor's degrees from Florida's universities (about \$33,500), which offer bachelor's degrees in more areas of study, including many in traditional arts and humanities.

Earning outcomes varied across areas of study. The programs with the highest number of completers were Registered Nursing/Registered Nurse (2,345 graduates) and Business Administration, Management and Operations, Other (more than 4,700). The median first-year earnings of graduates with bachelor's degrees in Registered Nursing/Registered Nurse were about \$62,500, which exceeded the statewide median for bachelor's degrees from colleges by approximately \$20,000. The median first-year earnings of graduates with bachelor's degrees in Business Administration, Management and Operations, Other were \$36,220, which fell below the statewide median for bachelor's degrees from colleges by \$5,200.

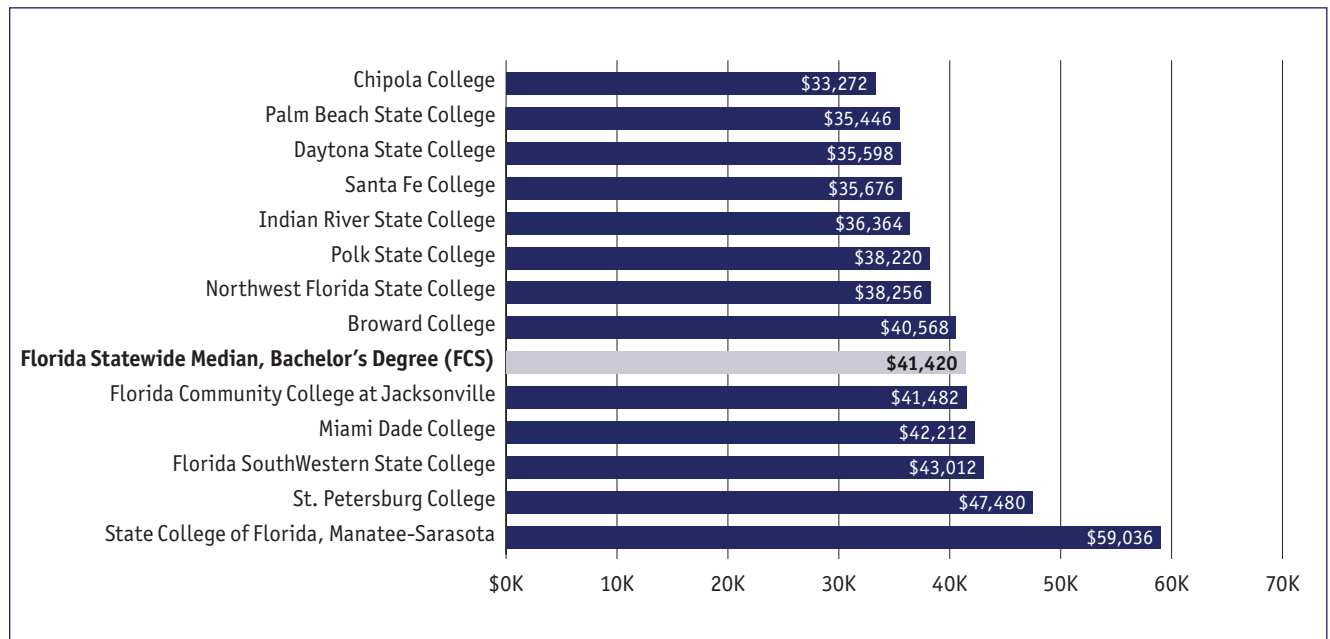
Table 14: Median First-Year Earnings of Graduates With Bachelor's Degrees Awarded by Colleges, by Area of Study

Area of Study	Number of Completers	Median First-Year Earnings
Education, Other	81	\$27,888
Interior Design	39	\$30,784
Cinematography and Film/Video Production	46	\$30,818
English/Language Arts Teacher Education	12	\$30,962
Human Services, General	75	\$31,068
Biology/Biological Sciences, General	46	\$31,632
Legal Assistant/Paralegal	144	\$32,928
Orthotist/Prosthetist	100	\$33,388
Natural Resources Management and Policy, Other	66	\$33,992
Veterinary/Animal Health Technology/Technician and Veterinary Assistant	135	\$34,130
Health/Health Care Administration/Management	146	\$34,462
Animation, Interactive Technology, Video Graphics and Special Effects	41	\$35,508
Finance, General	49	\$35,532
Science Teacher Education/General Science Teacher Education	60	\$35,972
Business Administration, Management and Operations, Other	4,727	\$36,220
International Business/Trade/Commerce	217	\$36,624
Elementary Education and Teaching	1,099	\$37,380
Early Childhood Education and Teaching	283	\$37,800
Business Administration and Management, General	152	\$38,214
Health Services Administration	309	\$38,268
Mathematics Teacher Education	240	\$38,330
Purchasing, Procurement/Acquisitions and Contracts Management	446	\$39,000
Special Education and Teaching, General	1,062	\$39,080
Information Technology	50	\$39,232
Biology Teacher Education	61	\$39,888
Homeland Security, Law Enforcement, Firefighting, and related Protective Services, Other	1,091	\$40,470
Florida Statewide Median, Bachelor's Degrees, FCS	14,240	\$41,420
Management Information Systems, General	20	\$42,772
Technology Teacher Education/Industrial Arts Teacher Education	17	\$43,368
Engineering Technologies and Engineering-Related Fields, Other	84	\$45,368
Computer Systems Networking and Telecommunications	113	\$46,248
Dental Hygiene/Hygienist	298	\$50,752
Clinical Laboratory Science/Medical Technology/Technologist	12	\$50,922
Computer/Information Technology Services Administration and Management, Other	500	\$53,192
Registered Nursing/Registered Nurse*	2,345	\$62,534
Fire Services Administration	23	\$69,410
Health Services/Allied Health/Health Sciences, General	20	\$85,924

*In 2010, the U.S. Department of Education reclassified Nursing/Registered Nurse (CIP code 51.1601) to Registered Nursing/Registered Nurse (CIP code 51.3801). Some institutions granted both degrees during the transition. This represents the weighted average of those two CIP codes.

Figure 24 shows the median first-year earnings of graduates with bachelor's degrees by colleges that had more than 100 graduates. Median first-year earnings ranged from less than \$35,000 (Chipola College) to about \$59,000 (State College of Florida, Manatee-Sarasota).

Figure 24: Median First-Year Earnings of Graduates With Bachelor's Degrees, by College



First-Year Earnings of Graduates With Master's Degrees

Public education institutions in Florida awarded more than 74,000 master's degrees during the five-year study. More than 60 percent of these graduates were found in the matched student record/unemployment insurance wage database and WRIS2 dataset used for this report.

Graduates with master's degrees were rewarded in the labor market. The median first-year earnings of graduates with master's degrees in Florida were around \$49,000, compared with less than \$34,000 for graduates with bachelor's degrees from universities. Some of this is attributable to the fact that many graduates with master's degrees are older and already in careers, so their earnings will likely be higher. Further work is needed to separate the added value of the skills learned when attaining a master's degree from the characteristics of the graduates who earn them. But as the data show, graduates with master's degrees earn more, often far more, than graduates with only bachelor's degrees.

Like the first-year earnings of graduates with bachelor's degrees, the first-year earnings of graduates with master's degrees varied considerably by area of study and institution. For area of study, the earnings gained for having a master's degree, not just a bachelor's degree, ranged from around \$6,000 (Social Work) to more than \$25,000 (Business Administration and Management, General and Registered Nursing/Registered Nurse). Clearly, the extent of the benefit of earning a master's degree is associated with area of study (Figure 25).

Figure 25: Median First-Year Earnings of Graduates With Bachelor's or Master's Degrees, by Popular Fields of Study

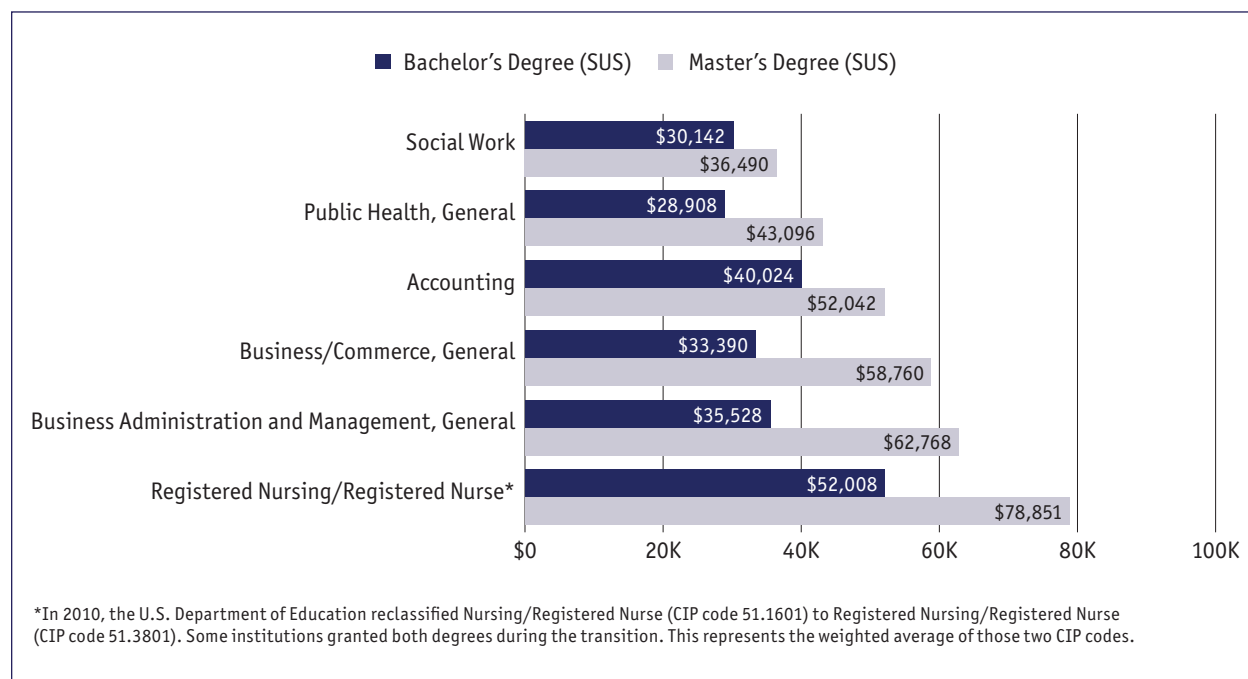
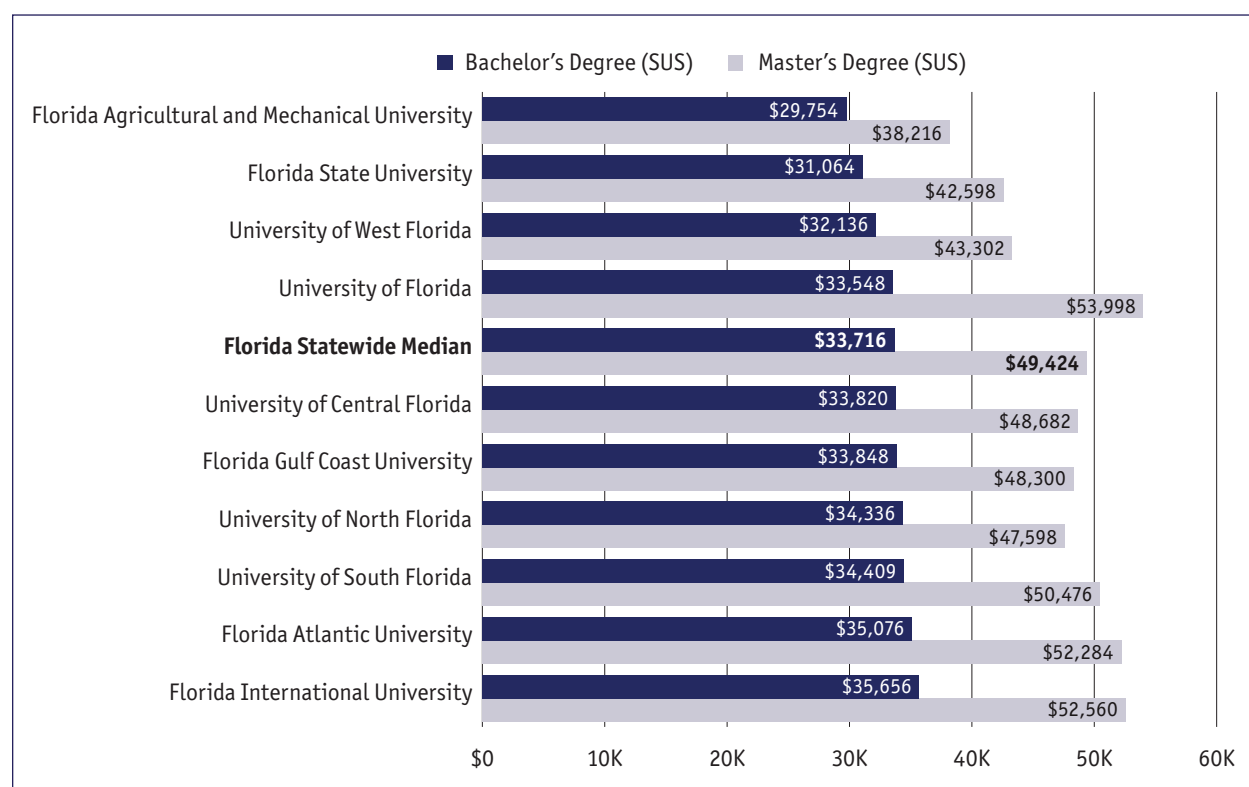


Figure 26 reports earnings premiums between master's and bachelor's degrees for each university across Florida that met reporting requirements. The median first-year earnings of graduates with master's degrees differ across institutions. Graduates with master's degrees from Florida Agricultural and Mechanical University had median first-year earnings of less than \$39,000 and those from University of West Florida and Florida State University were less than \$44,000. In contrast, graduates with master's degrees from four universities (University of South Florida, Florida Atlantic University, Florida International University, and University of Florida) had median first-year earnings of more than \$50,000.

Figure 26 also compares the earnings between master's and bachelor's degrees. Differences ranged from around \$8,000 (Florida Agricultural and Mechanical University) to around \$20,000 (University of Florida). These within-university differences, to some degree, take into account the differences in local labor markets and confirm (a) the value of the master's degree and (b) that great differences can exist in the added value of the master's degree. Of note, earnings outcomes reported at the university level reflect the mix of majors within each degree level: universities that graduate more students in higher paying areas in the labor market, such as Business or Nursing, will have an advantage over universities that graduate more students in lower paying areas, such as Social Work.

Figure 26: Median First-Year Earnings of Graduates With Bachelor's or Master's Degrees, by University



Specialist Degrees

During the five-year study, Florida's universities awarded more than 1,000 specialist degrees. As noted previously, the specialist degree is an advanced degree designed for people who want to develop skills beyond the master's level but who are not interested in pursuing a doctorate degree. Most specialist degrees awarded were concentrated in education-based professions, such as Curriculum and Instruction (288) and Educational Leadership and Administration, General (411).

Figure 27 displays the median first-year earnings of graduates with specialist degrees for all programs in Florida. Median first-year earnings varied widely, as around \$25,000 separated the lowest median first-year earnings (Marriage and Family Therapy/Counseling) from the highest median first-year earnings (Education, General). Clearly, choosing the right specialty for this type of degree can have a significant impact on earnings.

Figure 27: Median First-Year Earnings of Graduates With Specialist Degrees, by Program

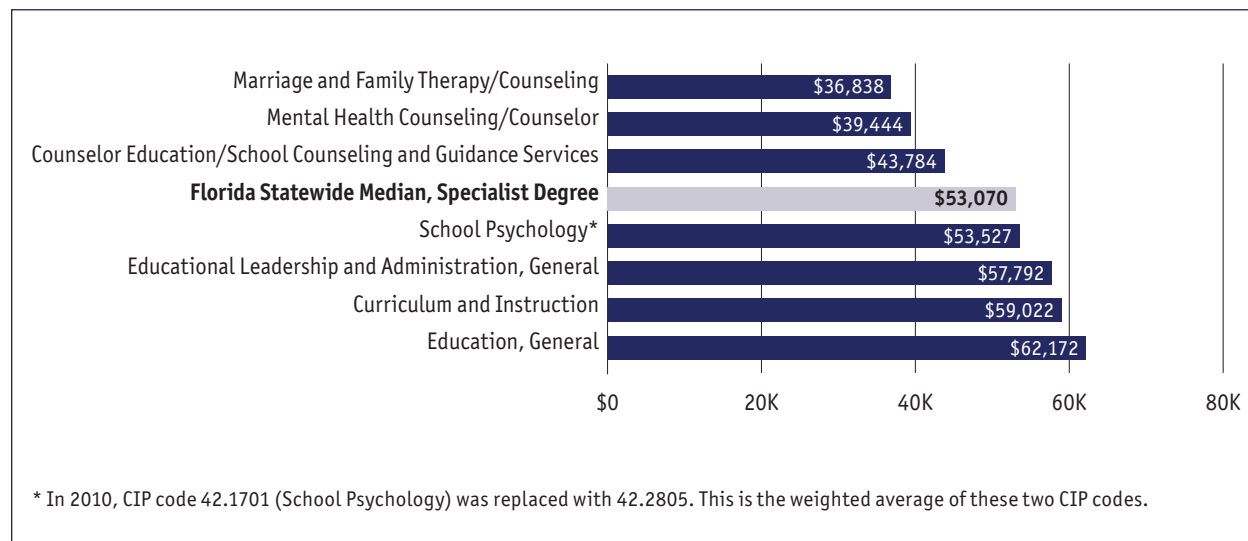
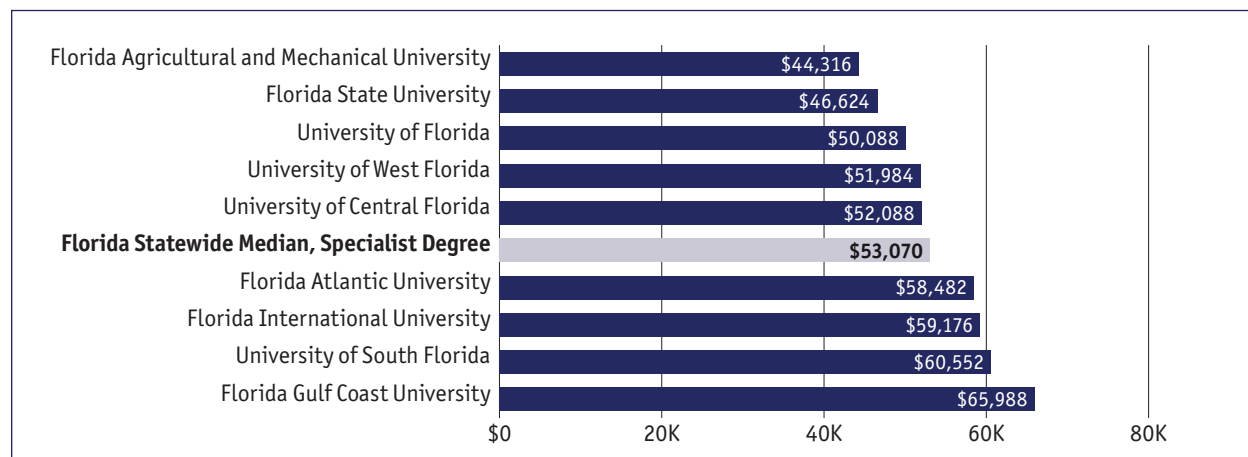


Figure 28 displays the median first-year earnings of graduates with specialist degrees by university. Here again, median first-year earnings varied considerably, ranging from less than \$50,000 (Florida State University and Florida Agricultural and Mechanical University) to more than \$65,000 (Florida Gulf Coast University). Graduates tended to experience greater earnings if they attended universities in larger metropolitan areas.

Figure 28: Median First-Year Earnings of Graduates With Specialist Degrees, by University



As noted previously, one of the main values of the data used in this report is that they are built around the earnings of graduates from specific programs offered by specific universities. This allows a more detailed analysis than the area of study- or institutional-level analyses presented in Figures 27 and 28.

Figures 29 and 30 report data on the earnings of graduates at all three levels of postbaccalaureate degrees (master's, specialist, and doctorate) for two popular specialties: Educational Leadership and Administration (2,342 master's, 411 specialist, and 360 doctorate degrees) and Curriculum and Instruction (1,619 master's, 288 specialist, and 443 doctorate degrees).

Only four universities (University of South Florida, University of Florida, University of Central Florida, and Florida Atlantic University) awarded all three degrees in both Classification of Instructional Programs (CIP) codes, and only two of them (University of South Florida and University of Florida) awarded all three credentials in both specialties. However, even these limited data validate the value of the specialist degree while reinforcing the importance of students carefully choosing a program and institution.

Figure 29 reports the program-level data for the largest specialist degree program in the state: Educational Leadership and Administration. Substantial gains can be had statewide by earning either specialist or doctorate credentials after the master's degree. Although graduates with doctorate degrees in Educational Leadership and Administration had higher median first-year earnings than their counterparts with specialist degrees, they also invested more resources in earning that degree. For students who do not want to or cannot invest that extra time and money, the specialist degree may be a viable option.

That said, considerable variation existed across programs. For example, graduates with master’s degrees from University of Florida had median first-year earnings that lagged behind the state median by almost \$8,000, and graduates with specialist and doctorate degrees had median first-year earnings similar to the statewide median. Additionally, the earnings of graduates from University of Central Florida lagged behind the statewide median in all categories. In contrast, graduates at all three levels from University of South Florida and Florida Atlantic University surpassed the statewide medians for their respective credential levels.

Figure 29: Median First-Year Earnings of Graduates With Credentials in Educational Leadership and Administration, by Postbaccalaureate Credential

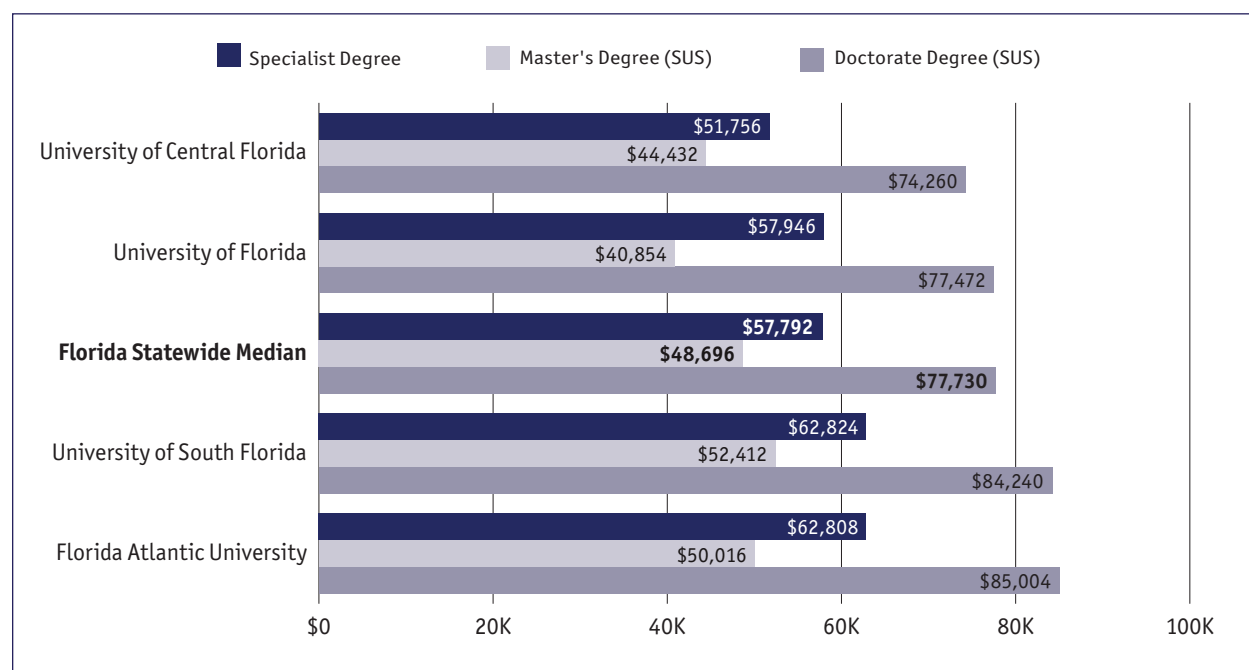
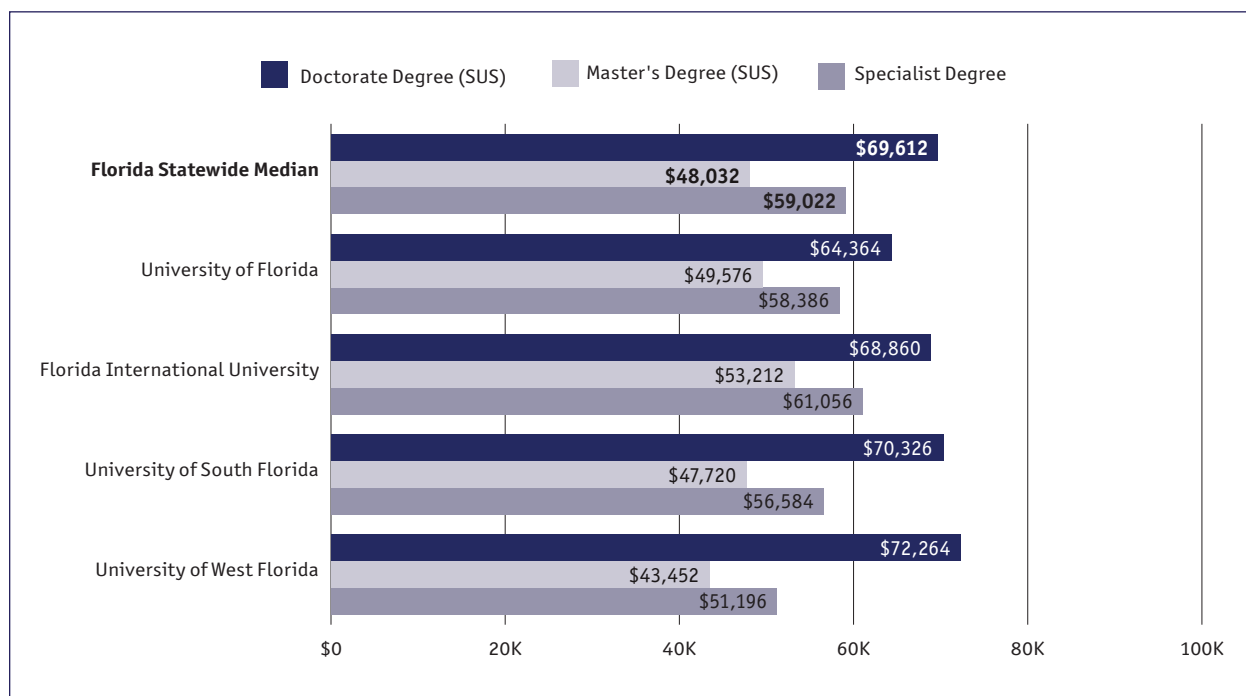


Figure 30 displays the median first-year earnings of graduates at each of the three levels of postbaccalaureate credentials for the field of Curriculum and Instruction. Statewide, graduates with doctorate and specialist degrees in this field earned substantially more than graduates with master’s degrees. Keeping that in mind, one can see that graduates with specialist and doctorate degrees in the field of Curriculum and Instruction from University of Florida earned less than the statewide median, but its master’s graduates earned slightly more than the statewide median. Also, the first-year earnings of graduates from master’s and specialist degree levels from University of West Florida lagged behind the statewide medians for first-year earnings. Finally, graduates with specialist degrees from Florida International University had strong outcomes in terms of earnings. Graduates with doctorate degrees from University of West Florida had the highest median first-year earnings in the field of Curriculum and Instruction.

Students considering their options for advanced degrees should keep this program variation in mind.

Figure 30: Median First-Year Earnings of Graduates With Credentials in Curriculum and Instruction, by Postbaccalaureate Credential



Professional Degrees

Many students in Florida seek postbaccalaureate degrees that will qualify them for licenses to work in a chosen profession. Table 15 reports the median first-year earnings of graduates of three professional doctorate degrees in Florida: Medicine, Law, and Pharmacy.

Graduates with professional degrees in Medicine made almost the same in the first year after graduation, regardless of the institution from which they graduated;¹⁹ median first-year earnings were less than \$50,000. But as noted previously, this is likely the result of the structure of the profession, whereby the majority of medical school graduates first serve as interns, which is an essential step to gaining a license to practice medicine unsupervised.

¹⁹ This is based on data from five medical schools in Florida. Data for graduates of Florida Atlantic University were not included in the database.

Far more variation was found among graduates with professional degrees in Law. Given the time and money spent earning a law degree, the return on investment, at least in the short term, seems to be low. Graduates of Florida Agricultural and Mechanical University Law School had median first-year earnings of about \$40,000, about \$4,000 less than graduates from Florida State University and about \$5,000 less than graduates from Florida International University. Law graduates from University of Florida do best, with median first-year earnings of more than \$50,000.

Two of Florida's three pharmacy programs met reporting requirements, and although about \$7,000 separated the first-year earnings of graduates from Florida Agricultural and Mechanical University from graduates of University of Florida, the median first-year earnings of graduates from both programs topped \$100,000—twice the earnings of law graduates. What you study matters!

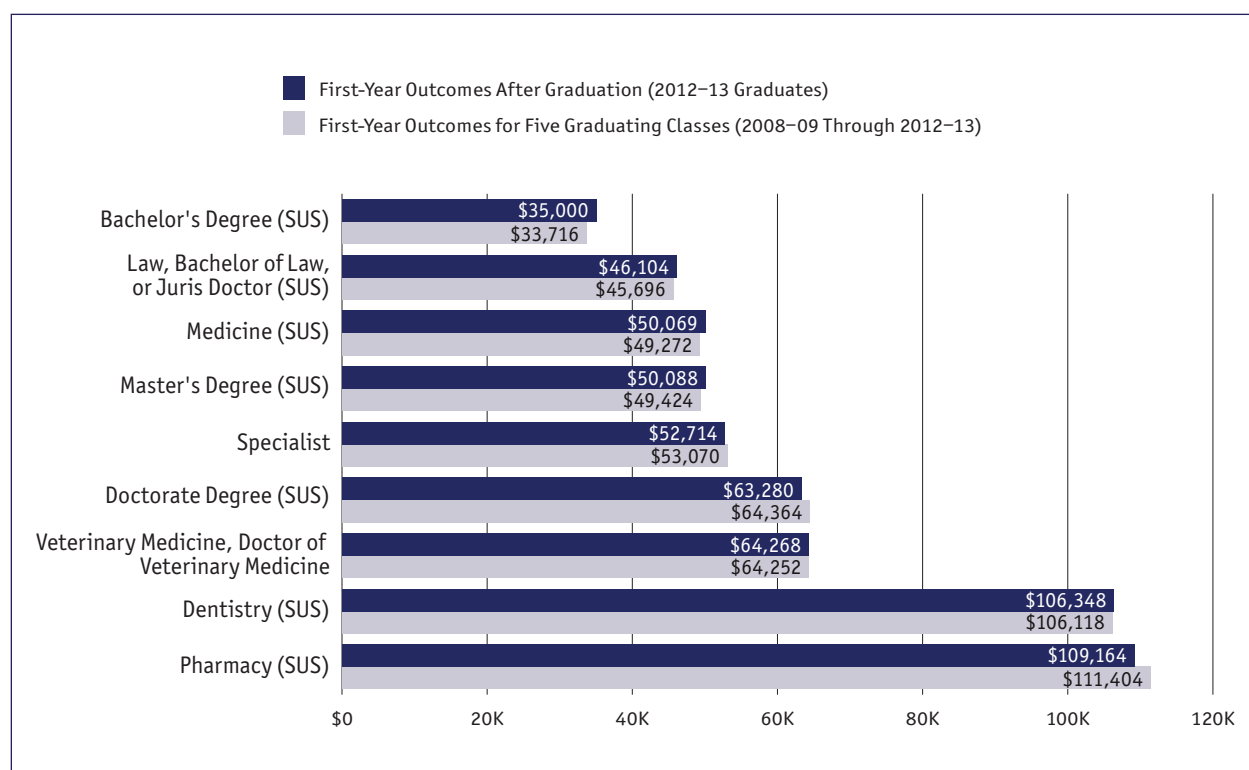
Table 15: Median First-Year Earnings of Graduates With Professional Degrees, by Degree and University

Institution	Median Starting Wage
Medicine Degrees	
Florida International University	\$46,048
Florida State University	\$48,628
University of Central Florida	\$49,523
University of Florida	\$49,608
University of South Florida	\$49,508
Law Degrees (Law, Bachelor of Law, or Juris Doctor)	
Florida Agricultural and Mechanical University	\$40,696
Florida International University	\$46,152
Florida State University	\$44,644
University of Florida	\$50,152
Pharmacy Degrees	
Florida Agricultural and Mechanical University	\$105,432
University of Florida	\$112,612

Changes in First-Year Earnings Among Graduates From Universities

The median first-year earnings of graduates during the five-year study can be compared in isolation with those from 2012–13. Although many programs will not have a sufficient number of graduates to enable reporting consistent with confidentiality constraints, reporting at higher levels of aggregation is possible (Figure 31).

Figure 31: Median First-Year Earnings of Graduates From Universities, by Degree



At the bachelor's degree level, Registered Nursing/Registered Nurse remained the program with the highest median first-year earnings (\$51,974, but a 0.07 percent decrease compared with the five-year average),²⁰ and Biology/Biological Sciences, General remained the program with the lowest median first-year earnings (\$26,371, a 1.9 percent increase compared with the five-year average).

²⁰In 2010, the U.S. Department of Education reclassified Nursing/Registered Nurse (CIP code 51.1601) to Registered Nursing/Registered Nurse (CIP code 51.3801). Some institutions granted both degrees during the transition. This represents the weighted average of those two CIP codes.

Many of the reportable bachelor's degree programs noted increased median first-year earnings among graduates. The greatest increase occurred in Marketing/Marketing Management, General (up 6.1 percent, from \$33,592 to \$35,628). The smallest increase was in English Language and Literature, General (up 0.4 percent, from \$28,552 to \$28,665). The largest decrease in first-year earnings occurred in Criminal Justice/Safety Studies (down 0.7 percent, from \$29,552 to \$29,356).

Median first-year earnings were highest among graduates from University of Florida (\$36,330, an 8.3 percent increase) and lowest among graduates from New College of Florida (\$25,192, a 7.0 percent increase).

Median first-year earnings decreased among some graduates with bachelor's degrees from Florida Agricultural and Mechanical University (down 0.7 percent, from \$29,754 to \$29,550).

Changes in Median First-Year Earnings Among Graduates With Master's Degrees

Comparing the data on median first-year earnings from academic years 2008–09 through 2012–13 with 2012–13 in isolation, the master's-level program with the highest median first-year earnings remained Registered Nursing/Registered Nurse (\$80,511, a 2.11 percent increase compared with the five-year average). Graduates with master's degrees in Biological and Biomedical Sciences, Other had the lowest median first-year earnings (\$35,154, a 0.7 percent decrease compared with the five-year average).

The greatest decreases in median first-year earnings occurred in Public Administration (-5.9 percent, from \$45,000 to \$42,336) and Library and Information Science (-5.0 percent, from \$39,948 to \$37,972). Median first-year earnings increased in nine programs:

- Audiology/Audiologist and Speech-Language Pathology/Pathologist (3.7 percent, from \$53,804 to \$55,808)
- Criminal Justice/Safety Studies (3.6 percent, from \$41,536 to \$43,024)
- Educational Leadership and Administration, General (3.5 percent, from \$48,696 to \$50,414)
- Business/Commerce, General (2.9 percent, from \$58,760 to \$60,432)
- Social Work (2.6 percent, from \$36,490 to \$37,426)

- Registered Nursing/Registered Nurse (2.1 percent, from \$78,851 to \$80,511)
- Business Administration and Management, General (2.1 percent, from \$62,768 to \$64,052)
- Accounting (1.5 percent, from \$52,042 to \$52,836)
- Counselor Education/School Counseling and Guidance Services (0.4 percent, from \$41,312 to \$41,490)

Graduates with master's degrees from University of Florida had the highest median first-year earnings (\$57,036, a 5.6 percent increase). Florida Agricultural and Mechanical University remained the institution from which graduates had the lowest median first-year earnings (\$40,084, a 4.9 percent increase).

Median first-year earnings decreased the most among graduates from Florida Atlantic University (3.4 percent, from \$52,284 to \$50,526) and least among graduates from University of Central Florida (0.14 percent, from \$48,682 to \$48,616).

Where the Jobs Are

Although this report focuses primarily on the first-year earnings of graduates for academic years 2008–09 through 2012–13, clearly the earnings that graduates command are not only a function of the programs from which they graduate but also of the strength of the labor market into which they enter. The following section provides information about the demand for jobs, including information on the fastest growing industries and occupations forecast through 2022. This section also provides information on the top 15 jobs statewide that require a postsecondary credential—that is, where the demand for workers is projected to surpass the supply of workers. This section aims to supplement the earnings data presented throughout this report to help students anticipate where the demand for workers may be strongest across Florida in the coming years.

As students consider their educational options, two factors are important: the size of the industries into which they might find employment and the growth rates of industries. Table 16 shows that in April 2015, the largest industry sectors in Florida were Trade, Transportation, and Utilities (20.7 percent of total employment); Professional and Business Services (15.0 percent); Education and Health Services (14.9 percent); Leisure and Hospitality (14.1 percent); and Total Government (13.4 percent). Together, these five industries accounted for 78 percent of Florida’s total non-agricultural employment.

Table 16: Non-Agricultural Employment in Florida, by Industry, April 2015 (Seasonally Adjusted)

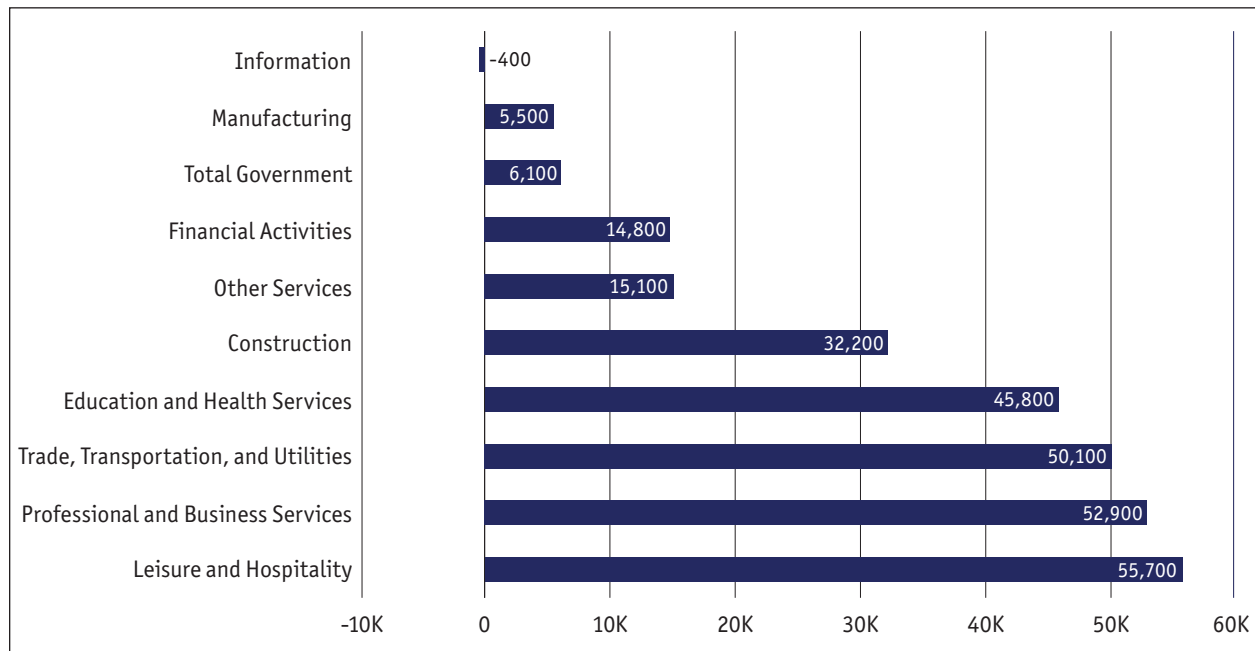
Industry	Number of Jobs	Percent of Total Jobs
Total	8,045,500	—*
Information	135,400	1.7%
Other Services	336,700	4.2%
Manufacturing	334,500	4.2%
Construction	423,300	5.3%
Financial Activities	533,800	6.6%
Total Government	1,080,000	13.4%
Leisure and Hospitality	1,131,000	14.1%
Education and Health Services	1,196,700	14.9%
Professional and Business Services	1,204,200	15.0%
Trade, Transportation, and Utilities	1,664,300	20.7%
Information	135,400	1.7%

Source: U.S. Department of Labor, Bureau of Labor Statistics, Current Employment Statistics Program, released May 22, 2015. Prepared by Florida Department of Economic Opportunity, Bureau of Labor Market Statistics.

*Total does not sum to 100 percent because of rounding.

Of these 10 large industries, nine saw gains in jobs from April 2014 to April 2015 (Figure 32). Only the Information industry lost jobs during that time frame.

Figure 32: Number of Jobs Gained or Lost in Florida From April 2014 to April 2015, by Industry (Seasonally Adjusted)



Long-term projections of growth by industry and occupation may be more important than short-term growth trends. Clearly, finding employment in a rapidly expanding industry or occupation is easier than finding one in a slow-growth industry. Table 17 shows the industries in which growth is most likely to occur through 2022. The two fastest growing industries are related to construction. With annual growth of more than 4.7 percent, Construction of Buildings is projected to be the fastest growing field. The health care industry is also projected to grow rapidly due to population gains, the aging population, and improved medical technologies.

Table 17: Forecast of the Fastest Growing Industries* in Florida Through 2022

Rank	Industry	Annual Change	
		Number	Percent
1	Construction of Buildings	3,626	4.73%
2	Specialty Trade Contractors	10,823	4.26%
3	Ambulatory Health Care Services	14,718	3.41%
4	Heavy and Civil Engineering Construction	1,523	3.07%
5	Nursing and Residential Care Facilities	5,301	2.88%
6	Nonmetallic Mineral Product Manufacturing	512	2.82%
7	Educational Services	3,864	2.50%
8	Social Assistance	2,823	2.39%
9	Professional, Scientific, and Technical Services	11,339	2.36%
10	Wood Product Manufacturing	255	2.29%

Source: Florida Department of Economic Opportunity, Bureau of Labor Market Statistics. Released October 2014.

*Includes industries with a minimum of 10,000 jobs in 2014.

High growth rates do not necessarily mean that many new jobs will be created. For example, Wood Product Manufacturing has a projected annual growth rate of more than 2 percent, but only 250 or so new jobs will be created per year. Another way to look at where the jobs will likely be is to see which industries will be creating the most new jobs, regardless of the growth rate. Table 18 presents the 10 industries in which the most jobs are likely to be created.

Ambulatory Health Care Services is a large industry that is expected to grow rapidly in the coming years. Similarly, Professional, Scientific, and Technical Services is expected to add numerous new jobs and has a high rate of growth. However, two industries, Hospitals and Administrative and Support Services, have lower growth rates, but because they are large industries, they will add many more jobs than most of the fastest growing industries listed in Table 17.

Table 18: Forecast of the Industries Gaining the Most New Jobs in Florida Through 2022

Rank	Industry	Annual Change	
		Number	Percent
1	Ambulatory Health Care Services	14,718	3.41%
2	Professional, Scientific, and Technical Services	11,339	2.36%
3	Specialty Trade Contractors	10,823	4.26%
4	Local Government	10,683	1.46%
5	Administrative and Support Services	9,999	1.81%
6	Food Services and Drinking Places	9,984	1.43%
7	Nursing and Residential Care Facilities	5,301	2.88%
8	Hospitals	4,587	1.72%
9	Educational Services	3,864	2.50%
10	Construction of Buildings	3,626	4.73%

Source: Florida Department of Economic Opportunity, Bureau of Labor Market Statistics. Released October 2014.

Growth in Occupations

Considering growth in occupations is also important. Table 19 shows the occupations projected to grow fastest through 2022. The Home Health Aides occupation is projected to grow the fastest annually (4.9 percent). Note that nine of the top 10 fastest growing occupations require educational attainment beyond high school, but only one (Market Research Analysts and Marketing Specialists) requires a bachelor's degree. This confirms the value of technical credentials awarded by FCS institutions and DTCs.

Table 19: Forecast of the Fastest Growing Occupations* in Florida Through 2022

Rank	Occupation	Annual Growth		Hourly Wage, 2014	Educational Attainment
		Percent	Number		
1	Home Health Aides	4.87%	1,442	10.82	Career Certificate
2	Cement Masons and Concrete Finishers	4.72%	547	16.11	Career Certificate
3	Cost Estimators	4.58%	561	28.35	Career Certificate/ Degree
4	Diagnostic Medical Sonographers	4.42%	203	29.36	Career Certificate
5	Heating, A.C., and Refrigeration Mechanics and Installers	4.26%	1,156	20.00	Career Certificate
6	Market Research Analysts and Marketing Specialists	3.88%	670	27.84	Bachelor's Degree
7	Nurse Practitioners	3.77%	244	44.59	Master's Degree+
8	Nonfarm Animal Caretakers	3.72%	423	10.91	Less Than High School
9	Drywall and Ceiling Tile Installers	3.71%	245	16.06	Career Certificate
10	Physical Therapist Assistants	3.71%	174	28.50	Career Certificate/ Degree

Note: Because the number of jobs in most industries declined during the economic downturn that began in 2007, some of the job growth projected in this forecast includes recapturing the jobs lost since that time.

*Includes occupations with a minimum employment greater than 4,000 jobs in 2014.

Where Is the Greatest Demand Relative to Supply?

Table 20 is based on Florida's Occupational Supply/Demand report that compares total supply (education/training graduates by occupation) against short-term demand (employer-posted Internet job ads by occupation).

The supply gap is the difference between occupational demand and supply. Supply gaps (marked with minus signs in Table 20) indicate that demand is greater than supply. These are occupations in which students will likely experience higher probabilities of finding employment. Entry, median, and experienced earnings for each occupation are also shown, so students can determine likely earnings for the occupation.

As an example, consider the Physical Therapist occupation. In 2013-14, state colleges and universities in Florida awarded 598 Physical Therapist credentials. However, the estimated demand is 1,485 therapists. This leaves a shortage of 887 trained individuals. Table 20 also shows that the entry level hourly wages are \$28.65 per hour; median hourly wages are \$40; and experienced hourly wages exceed \$46. This occupation requires a master's degree or higher. These statistics

reflect a good investment for prospective students due to strong job demand, an occupational shortage, and wages that are among the highest of the 10 occupations. Other occupations show similar gaps between supply and demand that students should consider when choosing their postsecondary options.

Table 20: Supply Gap in 10 Occupations Requiring Postsecondary Credentials

Occupation	Total Supply	Short-Term Demand	Supply Gap (-) or Overage	Entry Wage	Median Wage	Experienced Wage	Florida Education Level
Securities, Commodities, and Financial Services Sales Agents	941	2,049	-1,108	\$17.00	\$28.89	\$53.82	Bachelor's Degree
Physical Therapists	598	1,485	-887	\$28.65	\$40.00	\$46.62	Master's Degree or Higher
Industrial Engineers	336	1,152	-816	\$21.39	\$33.53	\$41.62	Bachelor's Degree
Occupational Therapists	353	1,045	-692	\$27.90	\$39.03	\$45.40	Master's Degree or Higher
Speech-Language Pathologists	576	1,074	-498	\$24.83	\$36.21	\$41.88	Master's Degree or Higher
Physician Assistants	544	774	-230	\$35.03	\$45.94	\$53.49	Bachelor's Degree
Medical Scientists, Except Epidemiologists	277	418	-141	\$21.13	\$33.51	\$48.74	Master's Degree or Higher
Recreational Therapists	56	137	-81	\$16.03	\$21.97	\$25.49	Bachelor's Degree
Sales Engineers	181	230	-49	\$32.47	\$50.13	\$69.34	Bachelor's Degree
Civil Engineers	953	969	-16	\$26.81	\$38.85	\$47.81	Bachelor's Degree

Source: Florida Department of Economic Opportunity, Bureau of Labor Market Statistics, June 2015.

Note: Based on 2013–14 graduates, using April 2015 short-term demand data from the Conference Board's Help Wanted OnLine data series.

Higher Education Pays: But Far More for Some Programs Than for Others

The U.S. Department of Labor's Bureau of Labor Statistics and the U.S. Census Bureau have documented the "big payoff" for higher education,²¹ but this report shows that the payoff varies considerably from program to program and from institution to institution. The bottom line: The type of postsecondary credentials that completers earn, and where they earn them, matter.

Most notably, the labor market clearly places a high value on technical associate's degrees. And for many students, some certificates may represent an efficient pathway into the labor market. At the bachelor's degree level, the data show that graduates from many campuses in the state, not just the state's best-known ones, earn, on average, roughly the same first-year wages.

In short, many pathways to good earnings are available to students in Florida, and the data in this report and on Florida's Economic Success Metrics website, <http://www.beyondeducation.org>, can help students find such earnings.

As students and others consider these data, some of the cautions put forward earlier in this report should be reiterated. Although the report documents wide variations in the first-year earnings of graduates from different programs, these variations have not been explained, leaving this issue open to further analysis. For example, the credentials of incoming students vary across institutions; missions vary across institutions; and many schools serve regional labor markets where earnings vary. Furthermore, the data reported here are all short-term results from the labor market. In the long term, graduates with bachelor's degrees tend to increase their earnings faster than those with associate's degrees, so the greater short-term differences documented here may erode over time. Indeed, the reader is encouraged to look at the longer term earnings data on Florida's Economic Success Metrics website: <http://www.beyondeducation.org>.

Additionally, postsecondary education has many rewards in addition to boosting earnings. However, if a student borrows \$50,000 and is earning \$25,000, he or she will likely be so consumed by trying to pay off the loans as to have little time to enjoy the other rewards.

To reiterate, knowing about variations in the economic payoff of degrees and programs of study is important—and further analysis may be needed to better understand specific institutional and program implications and nuances. The data reported here, however, should be made widely accessible to the public and should inform students, their families, taxpayers, and their representatives about the labor market outcomes of programs, degrees, and colleges.

21 <http://www.census.gov/prod/2002pubs/p23-210.pdf> and more recently <http://www.census.gov/prod/2011pubs/acs-14.pdf>

Appendix

Table 21: Match Rate for Graduates of Universities, by Institution

Institution	Percent of Completers of Bachelor's Degrees With Earnings Data	Percent of Completers of Master's Degrees With Earnings Data
Florida Agricultural and Mechanical University	64%	59%
Florida Atlantic University	71%	74%
Florida Gulf Coast University	72%	80%
Florida International University	68%	71%
Florida State University	59%	54%
Florida Statewide Median	65%	65%
The University of West Florida	66%	66%
University of Central Florida	70%	73%
University of Florida	50%	52%
University of North Florida	76%	78%
University of South Florida	70%	69%

Table 22: Match Rate for College Graduates and Completers, by Degree and Institution

Institution	Percent of Graduates/Completers With Wage Data
Associate of Applied Science Degree (FCS)	
Broward College	77%
College of Central Florida	100%
Daytona State College	73%
Eastern Florida State College	72%
Florida Gateway College	64%
Florida Keys Community College	80%
Florida Community College at Jacksonville	76%
Florida Statewide Median, Associate of Applied Science Degree (FCS)	76%
Gulf Coast State College	73%
Hillsborough Community College	84%
Indian River State College	75%
Lake-Sumter State College	71%
Miami Dade College	81%
North Florida Community College	100%
Northwest Florida State College	73%
Palm Beach State College	80%
Pasco-Hernando State College	70%
Pensacola State College	66%
Polk State College	86%

Institution	Percent of Graduates/ Completers With Wage Data
Santa Fe College	74%
Seminole State College of Florida	80%
South Florida State College	88%
St. Johns River State College	88%
St. Petersburg College	76%
State College of Florida, Manatee-Sarasota	81%
Tallahassee Community College	74%
Valencia College	74%

Associate of Arts Degree (FCS)	
Broward College	63%
Chipola College	58%
College of Central Florida	62%
Daytona State College	62%
Eastern Florida State College	61%
Florida Gateway College	64%
Florida Keys Community College	60%
Florida SouthWestern State College	68%
Florida Community College at Jacksonville	66%
Florida Statewide Median, Associate of Arts Degree (FCS)	64%
Gulf Coast State College	60%
Hillsborough Community College	66%
Indian River State College	61%
Lake-Sumter State College	64%
Miami Dade College	63%
North Florida Community College	54%
Northwest Florida State College	59%
Palm Beach State College	66%
Pasco-Hernando State College	66%
Pensacola State College	59%
Polk State College	66%
Santa Fe College	56%
Seminole State College of Florida	66%
South Florida State College	60%
St. Johns River State College	66%

Institution	Percent of Graduates/ Completers With Wage Data
St. Petersburg College	65%
State College of Florida, Manatee-Sarasota	63%
Tallahassee Community College	61%
Valencia College	68%

Associate of Science Degree (FCS)	
Broward College	83%
Chipola College	72%
College of Central Florida	71%
Daytona State College	77%
Eastern Florida State College	76%
Florida Gateway College	87%
Florida Keys Community College	72%
Florida SouthWestern State College	85%
Florida Community College at Jacksonville	79%
Florida Statewide Median, Associate of Science Degree (FCS)	80%
Gulf Coast State College	86%
Hillsborough Community College	81%
Indian River State College	81%
Lake-Sumter State College	88%
Miami Dade College	75%
North Florida Community College	71%
Northwest Florida State College	77%
Palm Beach State College	80%
Pasco-Hernando State College	83%
Pensacola State College	76%
Polk State College	88%
Santa Fe College	80%
Seminole State College of Florida	82%
South Florida State College	92%
St. Johns River State College	80%
St. Petersburg College	82%
State College of Florida, Manatee-Sarasota	80%
Tallahassee Community College	77%
Valencia College	80%

Institution	Percent of Graduates/ Completers With Wage Data
College Credit Certificate (FCS)	
Broward College	80%
Chipola College	88%
College of Central Florida	77%
Daytona State College	68%
Eastern Florida State College	61%
Florida Gateway College	68%
Florida Keys Community College	61%
Florida SouthWestern State College	82%
Florida Community College at Jacksonville	73%
Florida Statewide Median, College Credit Certificate (FCS)	73%
Gulf Coast State College	78%
Hillsborough Community College	77%
Indian River State College	74%
Lake-Sumter State College	81%
Miami Dade College	73%
North Florida Community College	82%
Northwest Florida State College	72%
Palm Beach State College	75%
Pasco-Hernando State College	74%
Pensacola State College	65%
Polk State College	78%
Santa Fe College	70%
Seminole State College of Florida	71%
South Florida State College	87%
St. Johns River State College	65%
St. Petersburg College	74%
State College of Florida, Manatee-Sarasota	64%
Tallahassee Community College	74%
Valencia College	73%

Institution	Percent of Graduates/ Completers With Wage Data
Career Certificate (FCS)	
Broward College	85%
Chipola College	78%
College of Central Florida	73%
Daytona State College	74%
Eastern Florida State College	75%
Florida Gateway College	72%
Florida Keys Community College	87%
Florida SouthWestern State College	85%
Florida Community College at Jacksonville	72%
Florida Statewide Median, Career Certificate (FCS)	76%
Gulf Coast State College	83%
Hillsborough Community College	77%
Indian River State College	70%
Miami Dade College	76%
North Florida Community College	77%
Northwest Florida State College	79%
Palm Beach State College	73%
Pasco-Hernando State College	78%
Pensacola State College	62%
Polk State College	85%
Santa Fe College	75%
Seminole State College of Florida	77%
South Florida State College	80%
St. Johns River State College	82%
St. Petersburg College	79%
Tallahassee Community College	83%
Valencia College	88%

Table 23: Match Rate for Completers of Career Certificates, by District Technical Center

Institution	Percent of Completers With Wage Data
Aparicio-Levy Technical College	61%
Atlantic Technical College	64%
Bradford-Union Area Career Technical Center	60%
Brewster Technical College	63%
Cape Coral Institute of Technology	68%
Charlotte Technical Center	71%
D.A. Dorsey Technical College	57%
DeSoto County Adult Education Center	65%
Dixie County Adult Center	50%
Emerald Coast Technical College	73%
Erwin Technical College	71%
First Coast Technical College	74%
Flagler Technical Institute	56%
Florida Panhandle Technical College	65%
Florida Statewide Median, Career Certificate, DTCs	68%
Fort Myers Institute of Technology	77%
Fred K. Marchman Technical College	60%
Gadsden Technical Institute	66%
George Stone Area Vocational Technical Center	67%
George T. Baker Aviation Technical College	78%
Immokalee Technical Center	63%
Indian River-Technical Center for Career and Adult Education	61%
Lake Technical College	75%
Learey Technical College	67%
Lindsey Hopkins Technical College	54%
Lively Technical Center	63%
Lorenzo Walker Institute of Technology	71%
Manatee Technical College	70%
Marion County Community Technical and Adult Education Center	74%
Maynard A. Traviss Career Center	73%
Miami Lakes Educational Center and Technical College	65%
Monroe County Adult and Community Education	51%
Okaloosa Applied Technology Center	65%
Orange Technical Education Center-Mid-Florida Tech	72%

Institution	Percent of Completers With Wage Data
Orange Technical Education Center—Orlando Tech	71%
Orange Technical Education Center—Westside Tech	63%
Orange Technical Education Center—Winter Park Tech	65%
Pinellas Technical College—Clearwater Campus	67%
Pinellas Technical College—St. Petersburg Campus	69%
Radford M. Locklin Technical Center	58%
Ridge Technical Center	71%
Robert Morgan Educational Center and Technical College	64%
Sheridan Technical College	61%
South Dade Technical College	48%
Sumter County Adult Education	60%
Suncoast Technical College	74%
Suwannee-Hamilton Technical Center	66%
Taylor Technical Institute	60%
Technical Education Center—Osceola	70%
The English Center	53%
Tom P. Haney Technical Center	71%
Wakulla County Adult and Community Education	68%
William T. McFatter Technical College	67%
Withlacoochee Technical College	68%

Completers Cohort 2008–09 Through 2012–13

The cohort includes graduates and completers during their first year after graduation from public postsecondary educational institutions for each academic year 2008–09 through 2012–13. Florida’s public postsecondary educational institutions include State University System of Florida, Florida College System, and District Technical Centers. The data for this cohort reflect employment, earnings, continuing education, and public assistance for the fall following graduation.

Key Concepts

Median first-year earnings and continuing education are key concepts related to the employment and continuing education outcomes used throughout this report. The rates reported are combined five-year rates for graduates in 2009, 2010, 2011, 2012, and 2013. This approach provides sufficient data at the local program level to enable students, parents, and other stakeholders to view more complete results. The minimum number of graduates to allow reporting for this project is 10. Results are suppressed when fewer graduates appear on any specific topic.

The median is the middle score in a distribution, and the first-year earnings of graduates reported here reflect the five-year median. Annualized calendar year fourth quarter (October–December) earnings of graduates for each year were arranged by institution from lowest to highest, and the middle value was selected for each institution and from a combined sorted statewide list. Wage data from the UI and the WRIS2²² are the underlying sources of employment and earnings data. Some information, such as wages for sole proprietorships and federal employees, may not be included in the data.

UI wage records provide only information about employment and earnings. The records do not provide data about the occupations in which graduates are employed; therefore, it is not possible to know whether graduates are employed in their fields of study or other fields.

²² The WRIS2 was developed from the interest of some states to share aggregate employment and wage outcomes with other states. The program is voluntary. Currently, 39 states, plus Washington, DC, and Puerto Rico, participate in WRIS2. A map of participating states can be found at http://www.doleta.gov/performance/pfdocs/WRIS2_Map_Aug_2015.pdf.

The continuing education data reflect a five-year average. The number of students enrolled in higher education in the academic year following graduation for academic years 2008–09 through 2012–13 was summed and divided by the total number of graduates across the five years. Out-of-state continuing education is not included in this report.

Outcome data related to graduates and completers and continuing education are provided by the FETPIP. FETPIP, located in the Florida Department of Education, is a data collection and consumer reporting system established by Florida law to provide follow-up data on former students and program participants who have graduated, exited, or completed a public education or training program in the State of Florida.

Definitions

Area of Study

The Area (or Field) of Study Code and Program refer to the Classification of Instructional Program (CIP). CIP was developed and is maintained by the U.S. Department of Education's National Center for Education Statistics (NCES). According to NCES, "The [CIP] provides a taxonomic scheme that supports the accurate tracking and reporting of fields of study and program completions activity. CIP was originally developed by the U.S. Department of Education's [NCES] in 1980, with revisions in 1985, 1990, 2000, and 2010."²³ For more information about CIP codes, visit NCES's website: <http://nces.ed.gov/ipeds/cipcode/>.

Florida uses a 10-digit CIP code to classify programs offered by District Technical Centers and non-college credit programs offered by colleges. The middle six digits are part of the NCES CIP (Classification of Instructional Programs) code taxonomy.

Number of Completers

The total number of students who completed or graduated from a program in the cohort.

Employment Records

Employment data obtained from the UI wage records, as provided by the Florida Department of Revenue and WRIS2.

²³ <http://nces.ed.gov/ipeds/cipcode/Default.aspx?y=55>.

First-Year Full-Time Earnings

The earnings of completers during the fourth quarter (October–December) following graduation. The earnings are equal to or exceed the full-time threshold. The full-time threshold equals the hourly minimum wage, multiplied by 40 hours per week, multiplied by 13 weeks. Earnings are annualized by multiplying by four.

Total Found Employed Percentage

The number of completers with earnings divided by the total number of completers.

Total Found Employed Full-Time Percentage

The number of completers with earnings at or exceeding the full-time threshold divided by the total number of completers.

Median First-Year Earnings

The median is the middle score in a distribution, and the first-year earnings of graduates reported here reflect the five-year median. Annualized calendar year fourth quarter (October–December) earnings of graduates for each year were arranged by institution from lowest to highest, and the middle value was selected for each institution and from a combined sorted statewide list.

Found Continuing Education Percentage

The number of completers who were enrolled at a State University System of Florida institution, Florida College System institution, or District Technical Center in the fall and spring semesters following graduation or completion of an educational program divided by the total number of completers.

Public Assistance Percentage

The number of completers who received public assistance from the Temporary Assistance for Needy Families program or the Supplemental Nutrition Assistance Program during the fourth quarter of the year divided by the total number of completers.

Student Loan Debt

The total average amount of student loans for 2012–13 at a public postsecondary educational institution, divided by the number of students receiving federal loans for that same period.

Data Disclosure

The data provided for the cohorts include only completers with valid Social Security numbers, and the earnings represent completers who met the full-time threshold. The full-time threshold equals the hourly minimum wage, multiplied by 40 hours per week, multiplied by 13 weeks. Earnings and public assistance data reflect the fourth quarter of the year (October–December). The earnings are annualized by multiplying by four. Finally, the records are unduplicated between years; therefore, students are represented only once per year. Data on student loan debt are self-reported by each public educational institution at the institution level. The data reflect the average student loan debt of all students (not just graduates) receiving federal loans in 2012–13. The data include federal student loans from Stafford, Perkins, Graduate PLUS, Parent PLUS, and TEACH programs.



Prepared by Mark Schneider
President, College Measures
Vice President and Institute Fellow,
American Institutes for Research